ATTACHMENT 6

EFFLUENT LIMITATIONS/MONITORING RATIONALE/SUITABLE DATA/ ANTIDEGRADATION/ANTIBACKSLIDING

ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding

Permit History:

1. A VPDES permit application was received on November 27, 1991. The submittal was in response to Department correspondence of October 8 and November 13, 1991. It was noted in the application (EPA Form 2C) that no flow of process wastewater existed at any of the marine railways. The application was complete on May 13, 1992, upon receipt of the Local Government Ordinance Form (LGOF). The permit was not issued within the 120-day timeframe allowed by regulation for issuances of new permits. The delay was attributed to the permittee's request for a public hearing and other changes to the permit necessitated by amendments to Department guidance regarding implementation of the water quality standards.

The permit was issued on November 30, 1993, with an expiration date of November 30, 1998. The permit contained the following: All piers and railway locations designated as discrete outfalls; Part I.A. effluent monitoring (storm water associated with a regulated industrial activity) at marine railways numbers 3 and 4; a condition, with a schedule of compliance, requiring railways 3 and 4 to be retrofitted with devices that would allow the regular collection of Part I.A. samples at those locations; comprehensive listing of shipyard BMPs promoted by the Department; prohibition on the use (removal, application) of hull coatings with any amount of tributyltin; a toxics management program, water quality sampling at railways 3 and 4; and preparation and maintenance of a storm water pollution prevention plan.

2. An application was submitted on June 3, 1998, with a revision submitted June 24, 1998. A permit processing fee of $2200.00 was submitted. The application contained EPA Forms 1, and 2F. EPA Form 2C was not submitted as the company noted process wastewaters were not being generated at the railways. The application was considered complete on September 23, 1998. The permit was reissued on November 30, 1998, with an expiration date of November 30, 2003. The reissued permit no longer identified piers and other vessel mooring locations as discrete outfalls; no longer required monitoring of precipitation runoff; did require monitoring of defined process wastewaters at all railways; did continue a toxics management program; did require water quality monitoring; contained a condition requiring the submittal of disposal records for abrasive blast material; and did continue storm water management plans.

3. On June 2, 2003, an application and permit processing fee ($10,200.00) were received. The application contained EPA forms 1 and 2C. To complete EPA 2C, the permittee sampled process wastewater. The wastewater contained: chemical oxygen demand 190 mg/l, suspended solids 77 mg/l, ammonia 0.63 mg/l, residual chlorine 1.8 mg/l, NO2/NO3 0.6 mg/l, phosphorus 1.8 mg/l, copper 130 ug/l, zinc 665 ug/l, and whole effluent toxicity (LC50 C. variegatus 66% effluent, M. bahia 17.7 % effluent).

The observed toxicity was attributed to use of potable water, as detectable concentrations of residual chlorine and ammonia were documented in the raw sample received at the WET lab. The application noted storm water was present at the railways, but since it becomes entrained soils and sediments, sampling was not performed. The permittee indicated that process wastewaters would be generated during the term of the reissued permit. It was noted that railway number 3 was the most active railway. The application was complete on September 15, 2003. The permit was reissued on December 1, 2003, with expiration on November 30, 2008.

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Permit History: (continued)

Based on the application, process wastewaters at outfall 003 (railway 3) were to be sampled quarterly (1/3M), and wastewater at the remaining railways sampled annually (1/YR). Storm water runoff at each railway was addressed in the permit, but monitoring not required. Water quality monitoring was required for outfall 003 during the permit term. Biological toxicity testing was required for each outfall. The storm water management condition was continued. The use of tributyltin was prohibited.

4. The application, prepared by legal counsel, was submitted on May 23, 2008. A permit processing fee is no longer required. Based on a discovery during recent site clean-up activities, the application identifies a new facility storm water discharge.

The application was submitted in a timely manner and upon initial receipt, was substantially complete.

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General Discussion:

The VADEQ (formerly the State Water Control Board) has been evaluating point source discharges from shipyards and vessel repair facilities for over two decades. During that time, various water-use scenarios were considered and evaluated. Samples of final wastewater(s) were taken for chemical analyses and biological toxicity testing by the permittee(s) and the DEQ.

In the Tidewater Region, shipyards rely the following repair structures to remove a vessel from the water to affect repairs on the hull - graving drydock, floating drydock, conventional marine railways, Crandall marine railways, SyncroLift® and travel lifts. At each of these point source locations, process wastewaters and/or storm water runoff may be generated and discharged to the nearby receiving stream. Unless best management practices (BMP) are employed to capture all flows or minimize the volume(s) released, it is expected that conventional and toxic pollutants will enter State waters.

In the case of the current permit (VA0087599), Associated Naval Architects, Incorporated (the company) operates four conventional marine railways at the facility. Each lifting structure has different capabilities insofar as their overall dimensions and lifting capacities are concerned.

At the railways, vessels are lifted from the stream on an un-decked open carriage affixed to rollers set atop parallel rails extending into the nearby navigable waterway. The vessel is stationed above the keel blocks set on the railway carriage and hauled upland by a system of chains and pulleys. Once hauled, the vessel remains on the carriage and the carriage positioned over a sloped location ashore. The area beneath the conventional railway is unpaved and appears to be a mixture of native soils, spent abrasive blast material, fill, and all manner of debris and residue from past/current vessel repair activities.

At each railway, a management practice is performed to protect machinery associated with hauling vessels. This practice involves rinsing mud and sediments from the haul chains prior to their passing across associated gears and pulleys. The permittee states that the source of this water is from the fire fighting system using water drawn from the nearby river. Chemicals are not added following withdraw from the source or prior to use.

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Specific Discussion - Regulatory Issues:

The Clean Water Act (CWA/FWPCA as amended through P.L. 107-303, November 27, 2002), Section 402, requires all point source discharges of pollutants to waters of the United States to obtain a National Pollutant Discharge Elimination System (NPDES) permit from either the U. S. Environmental Protection Agency (EPA) or a State authorized to issue the NPDES permit.

The Virginia State Water Control Board (SWCB) was authorized in 1975 by EPA to administer the NPDES Permit Program across the Commonwealth. The memorandum "Regarding Permit and Enforcement Programs between the SWCB and EPA" was signed in March 1975. EPA recognized that the State Water Control Law (SWCL) and the SWCB Regulation No. 6 provided adequate authority to carry out the federal program. The effect of this program delegation from EPA is that any point source discharger of pollutants in Virginia that obtains a VPDES permit from the SWCB and that subsequently complies with the issued VPDES permit is in compliance with both Federal and State Laws and regulations regarding such permit requirements.

Waste Discharges to State Waters:

The State Water Control Law, Title 62.1 (Waters of the State, Ports and Harbors, 2007), addresses waste discharges to state waters as follows:

§ 62.1-44.4 - Control by Commonwealth as to water quality

(1) No right to continue existing quality degradation in any state water shall exist nor shall such right be or be deemed to have been acquired by virtue of past or future discharge of sewage, industrial wastes or other wastes or other action by any owner. The right and control of the Commonwealth in and over all state waters is hereby expressly reserved and reaffirmed.

§ 62.1-44.5 - Prohibition of waste discharges or other quality alterations of state waters except as authorized by permit; notification required.

a. Except in compliance with a certificate issued by the Board, it shall be unlawful for any person to:

   1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances;

   2. Excavate in a wetland;

   3. Otherwise alter the physical, chemical or biological properties of state waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses;

Process Wastewaters:

The Environmental Protection Agency (EPA) has defined process wastewaters as follows, at 40 CFR 122.2:

> Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

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Specific Discussion - Regulatory Issues: (continued)

Process Wastewaters: (continued)

The Virginia Department of Environmental Quality at 9 VAC 25-31-10 (9/6/2006):

> Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process wastewater from an animal feeding operation (AFO) means water directly and indirectly used in the operation of the AFO for any of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits or other AFO facilities; direct contact swimming, washing, or spray cooling of the animals; or dust control. Process wastewater from an AFO also includes any water that comes into contact with any raw materials, products, or byproducts including manure, loiter, feed, milk, eggs or bedding.

The DEQ expanded the EPA's core definition to include known wastewaters generated at animal feeding activities.

Regional Clarification of Shipyard Process Wastewater:

The Department, in correspondence to the then President of the former South Tidewater Association of Ship Repairers, Incorporated (STASR) dated July 17, 2001, refuted the organization's dispute as to what constituted a process wastewater and further refined the Commonwealth's definition of process wastewaters at shipyards within the following text drawn from that letter (Attachment 14):

> "EPA defines process wastewater as (")any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, finished product, byproduct, or waste product.(") We consider any water used against the hull of a vessel to be process water. This would not only include water washing but eliminate any issue with regard to water pressure. We believe this to be in concert with EPA's definition."
>
> "In addition, EPA's multi-sector general permit, which is specific to storm water discharges, recognizes that the water used to remove marine growth is a process wastewater. That permit states (")If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted as a process wastewater by a separate NPDES permit.(")

This 2001 DEQ determination has not been amended or altered and remains relevant and valid for the purpose of individual VPDES permit development. In addition, 9 VAC 25-151-10 et seq. General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Storm Water Associated with Industrial Activity, under industrial Sector Q (water transportation, major group 44) and Sector R (ship and boat building or repair yards, major group 373) states: "If pressure washing is used to remove marine growth from vessels, the discharge must be permitted as a process wastewater buy a separate VPDES permit."

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Specific Discussion - Regulatory Issues: (continued)

Point Source Discharge:

The Environmental Protection Agency (EPA) defines point source at 40 CFR 122.2, as follows:

> Point source means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

The VPDES Permit Regulation (9 VAC 25-31-10 et seq., 2006) defines point source as follows:

> The content of the VPDES Regulation reads the same as EPA's definition, and will not be reiterated.

Regional Clarification of Shipyard Point Source Discharges:

In a conference call by TRO VPDES staff to the DEQ's Office of Water Permit Programs (OWPP) on May 9, 2008, it was maintained that marine railways are point source discharges for the purpose of VPDES (NPDES) permitting, when solid wastes, process wastewaters, and storm water runoff are present.

When EPA Region III was queried as to their position on applying the point source determination to marine railways of either design when process wastewaters and storm water are present, but no wastewater collection system exists, the following text was provided via e-mail response originated by Mr. Mark Smith, EPA Region III, NPDES Permit Manager for Virginia:

> "EPA R3 received a question from (permit writer) VADEQ whether the process wastewater that move to permeant surface waters from hull treatment processes performed on a ship positioned on a marine railyard was considered a point source? EPA concludes this discharge to surface water should be considered a point source based on the following: 1.) NPDES permitting regulations at 122.2 Definitions, defined a point source as "any discernible, confined and discrete conveyance". We believe the earthen channels underneath the railways fit that definition, and, 2.) Sector Q of the EPA Multi-Sector General Permit, section, 6.Q.4.3.1 Pressure Washing Area, states, "If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. We conclude that the process wastewater discharging to a surface water in this manner should be an NPDES permitted outfall. Thanks."

Without further elaboration, the proposed permit will continue to address marine railways as point source locations where intense industrial activities are performed and where process wastewaters, contaminated storm water runoff and solid industrial waste materials are generated and where the potential exists for direct and indirect discharges of conventional and toxic pollutants to State waters.

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Specific Discussion - Regulatory Issues: (continued)

Waste Discharges to State Waters:

The State Water Control Law, Title 62.1 (Waters of the State, Ports and Harbors, 2007), addresses waste discharges to state waters as follows:

For industrial wastes the Law states the following, at § 62.1-44.16:

(1) Any owner who erects, constructs, opens, reopens, expands or employs new processes in or operates any establishment from which there is a potential or actual discharge of industrial wastes or other wastes to state waters shall first provide facilities approved by the Board for the treatment or control of such industrial wastes or other wastes. Application for such discharge shall be made to the Board and shall be accompanied by pertinent plans, specifications, maps, and such other relevant information as may be required, in scope and details satisfactory to the Board.

The Law provides the following definitions at § 62.1-44.3:

"Establishment" means any industrial establishment, mill, factory, ... , boat, vessel, and every other industry or plant or works the operation of which produces industrial wastes or other wastes or which may otherwise alter the physical, chemical or biological properties of any state waters.

"Industrial wastes" means liquid or other wastes resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

"Other wastes" means decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, tar, oil, chemicals, and all other substances except industrial wastes and sewage which may cause pollution in state waters.

"Pollution" means such alteration of the physical, chemical, or biological properties of any state waters as will or is likely to create a nuisance or render such waters (a) harmful or detrimental or injurious to the public health, safety, or welfare or to the health of animals, fish, or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses, provided that (i) an alteration of the physical, chemical, or biological property of state waters or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution but which, in combination with such alteration of or discharge or deposit to state waters by other owners, is sufficient to cause pollution; (ii) The discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the Board, are "pollution" for the terms and purposes of this chapter.

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Specific Discussion - Regulatory Issues: (continued)

Water Quality Standards:

General Criteria: 9 VAC 25-260-20 A. states that:

> State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant or aquatic life.
>
> Specific substances to be controlled include, but are not limited to; floating debris, oil, scum, and other floating material; toxic substances including those which bio-accumulate; substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life. Effluents which tend to raise the temperature of the receiving stream will also be controlled. Conditions within mixing zones established according to 9 VAC 25-260-20 B. do not violate the provisions of this subsection.

40 CFR 122.44(d)(1) -

> Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

9 VAC 25-31-220 D. -

> The text of this citation closely mirror the Federal Regulations at this point, and are also applicable for the reissuance of VPDES Permit VA0087599.

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Process Operations - General Discussion:

Associated Naval Architects, Incorporated was established in 1946 near the facility's current location on the Western Branch of the Elizabeth River. The first marine railway was developed in 1951 with three additional marine railways acquired with the purchase of an adjoining property in 1959.

The facility is a medium-sized shipyard performing vessel maintenance and repair. Four conventional marine railways are used to haul vessels from the nearby River. Marine railway No.1 is limited to vessels 195 feet long by 40 feet wide, displacing 400 long tons. Railway No.3 is limited to vessels 235 feet long and 54 feet wide, displacing 875 long tons. The other two railways (No.2 and No. 4) are less capable and support vessels displacing 300 long tons. Each railway structure is certified by the Navy and other federal entities for the docking of their vessels (ACOE, USCG, NOAA, etc.).

Vessels serviced at the facility vary and include barges, tugs and push boats, combatant and non-combatant craft, various harbor security craft, and special purpose service craft.

Six docking slips are available for vessels up to 350 feet long, one for vessels up to 265 feet long, and four for vessels up to 200 feet long with a mean draft of 10 feet and a maximum draft of 15 feet. Available services at each location include electricity, potable water, salt water, compressed air, fuel loading/unloading, and sewage collection and disposal.

On-shore services include material lifting and handling provided by a 20-ton mobile or 40-Ton mobile, rough terrain hydraulic cranes, a 6000 pound forklift and a 6000 pound front end loader. Materials are kept in 8,100 square feet of dry, enclosed, permanent storage or 25,000 square feet of outdoor uncovered storage. Additional facilities include enclosed shops supporting a full range of ship, boat, craft and vessel repair activity with electrical, cutting, burning, welding, drilling, shearing, bending, machining, wood working, and milling facilities and equipment. Discrete shops include: 2,000 sq. ft. structural shop; 2,400 sq. ft. machine shop; 2,000 sq. ft. pipe shop; 1,600 sq. ft. electric shop; 1,000 sq. ft. rigging shop; and a 200 sq. ft. welding equipment repair shop.

The facility was first issued a VPDES permit late in November 1993, and has been continuously covered by a VPDES permit since that time. The permits addressed the facility's industrial process operations by a standard suite of specific best management practices developed by the DEQ during the late 1980's. Depending on the period of time during which each of the separate permits were issued, Part I.A. effluent monitoring may have focused on contaminated storm water runoff and/or process wastewaters generated during repair and maintenance activities at one or more of the four railways.

The current permit requires quarterly screening and reporting for flow, pH, TSS, dissolved copper, dissolved zinc, and biological toxicity testing at railway No. 3 (outfall 003), and annual testing/reporting for the same constituents at the remaining railways (outfalls 001, 002, 004). The results of all testing at each railway are summarized and provided within this attachment.

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Process Operations - Specific Discussion:

The first use of water in process operations occurs after the vessel is hauled. Vessels are first rinsed to remove salts, muds and sediments, and any loose biological growth and/or scale that may be adhered to or present upon the underwater portion of the vessel's hull. At greater application pressures, all biological growth is removed as well as loose anti-foulant (AF) and anti-corrosive (AC) hull coatings. If ultra-high pressures are used (>10,000 p.s.i.), AF/AC coatings can be removed to bare metal.

In lieu of using water for these activities, abrasive blast material (ABM) can also achieve the desired results. Using ABM will necessitate the receipt and storage of raw ABM prior to use, and collection, handling and ultimate disposal of potentially contaminated solid waste materials following use in this industrial process.

The surfaces beneath the marine railways are permeable and composed of spent abrasive material, debris and sediments from process activities and some amount of native soils or back fill. Since these surfaces are not paved with asphalt or concrete, it is difficult to completely remove accumulated ABM and process wastes (biological growth, paint chips, scale, etc.) at the conclusion of each hull preparation activity.

During hull preparation activities, process wastewaters are sampled as they fall from the vessels' hulls, but prior to entrainment into the underlying sediments at each location. Haul chain rinse waters are not currently sampled but will be addressed for the first time in the reissued permit.

In the application, the permittee has indicated that process wastewaters will continue to be generated at each of the site's conventional marine railways. Once generated, these wastewaters will continue to be released to the adjacent receiving stream either by direct entry (overspray), or entrainment into underlying soils with hydraulic connection to the receiving stream.

Process Wastewaters - Specific Discussion:

Expected Pollutants: The EPA has defined the term pollutant as follows (40 CFR 122.2):

Pollutant means dredged spoils, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended [42 U.S.C 2011 et seq.]), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural wastes discharge in to water.

The DEQ's definition reads identical to that of the EPA.

During the term of the current permit, the permittee has regularly monitored defined process wastewaters generated subsequent to vessel hauling and prior to other industrial activities. Based on chemical monitoring and biological toxicity testing performed to date, it has been determined that the probable pollutants from this shipyard include the substances and effects that follow.

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Process Wastewaters - Specific Discussion: (continued)

Expected Pollutants:

Metals:

The potentially toxic heavy metals copper and zinc are present in wastewater from this facility in a form (dissolved), and at concentrations, that may exceed the applicable in-stream water quality standards for those same substances. These metals are present in antifoulant (AF) and anti-corrosive (AC) hull coatings (removed and applied), piping, sacrificial zinc anodes, wiring, fencing, metallic alloys and other sources and materials typically found at an active shipyard. The permittee has stated that products formulated with any amount of the biocide tributyltin (TBT) have not been used (applied/removed) during the term of the permit.

Solids:

This grouping of conventional pollutants are present in process wastewater discharges from this facility. At times, concentrations of total suspended solids (TSS) appear excessive when compared to other industrial activities' process wastewaters that are TSS limited in established general and individual permits, to protect water quality at the point(s) of those discharge(s). Solids, including biological wastes (algae, hydroids, sponges, barnacles, mussels, etc.), originate from initial water washing to remove loose hull fouling, muds, slimes and sediments, and subsequent uses of water to remove some or all existing hull coating(s). If repair structures and surrounding areas are not regularly cleaned of waste materials, trash and other debris generated during the preparation of hulls, any flows of water exhibit the potential to convey solids to the receiving steam, including storm water runoff during or subsequent to industrial activities.

Petroleum, Oils, Lubricants:

Due to the nature of shipyard operations, vehicles and motorized support equipment fueled with gasoline or diesel are necessary elements of most process operations. Mechanized equipment can be found throughout the facility including areas associated with marine railway operations. Vessels may also contribute petroleum hydrocarbons in the way of residual product(s) in hoses, lines and piping systems being serviced, machinery lubricants, contaminated bilge and ballast water discharges, tank cleaning operations, and product transfer operations involving hydrocarbons. If not adequately overseen or if spills are not remediated in a timely manner, these materials have the potential to enter the river.

Acute Biological Toxicity:

Process wastewater discharges have been screened for biological toxicity. Based on a review of the available data, it appears that the discharges are, at times, acutely toxic to the organism(s) tested. For further information and determinations regarding toxicity, refer to Attachment 8 of this fact sheet.

Additional Discussion, Expected Pollutants:

Each of the pollutants noted above, among others, were substances of initial concern to the Environmental Protection Agency (EPA) during development and preparation of a draft document addressing development of effluent limitations and other regulatory requirements for the ship building and repair industry. That document (EPA 440 1-79 076b, 12/79), remained as draft and was never finalized.

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Process Wastewaters - Specific Discussion: (continued)

Each of the initial findings by the EPA regarding expected shipyard pollutants and effects are consistent with information generated by shipyards in the Tidewater Region over the terms of several VPDES permits issued to a number of facilities.

It was from the EPA's draft document that the VADEQ began development of an industry specific BMP Manual and an accompanying suite of shipyard and industry specific best management practices (BMP). The BMPs were adopted as standard VPDES permit conditions and have since been employed as part of shipyard VPDES permits issued by the Department since the late 1980's.

In conclusion, and based on industry, site, and permit specific effluent and wastewater monitoring performed in the time since the EPA's draft development document was issued (EPA 440 1-79 076b, 12/79), the Department has confirmed that the pollutants noted above should be expected from shipyards in the Commonwealth that continue with direct point source discharges of process wastewaters from discrete vessel repair activities and locations.

Existing Controls - General:

The permit allows defined process wastewater(s) to be generated and discharged directly to the Western Branch of the Elizabeth River from each marine railway location. Based on inspection reports and information presented in the application, the permittee relies on suitable and appropriate BMPs to control point source discharges of toxic and conventional pollutants. Sanitary wastewaters and sewage from the facility and vessels are collected and diverted to the collection system leading to facilities operated by the Hampton Roads Sanitation District.

At 40 CFR 122.2, the EPA defines best management practices as follows:

> Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

At 9 VAC 25-31-10, the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation defines best management practices as follows:

> Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to implement the prohibitions listed in 9 VAC 25-31-770 and to prevent or reduce pollution of surface waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
>
> The VPDES Permit Regulation's BMP definition reference to 9 VAC 25-31-770 addresses National Pretreatment Standards: prohibited discharges.

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Process Wastewaters - Specific Discussion: (continued)

Existing Controls - Conventional Marine Railways:

Pollutant control measures are limited to those BMPs addressing the control of abrasive blast and paint overspray (shrouds, application methods, use of lighters, etc.). The permittee does not collect any amount of defined process wastewater(s). In addition, storm water runoff passes through the confined areas associated with the railways and comes into contact with underlying soils and debris associated with, and resulting from, current and past industrial activities at those sites.

Conventional Marine Railways (Outfalls 001 - 004) - Specific Determination:

It has been determined that defined process wastewaters are generated at each railway and this will continue during the term of the reissued permit. Wastewaters are directed to navigable waters by direct discharge, overspray, erosion paths, and/or entrainment into underlying permeable soils. Once entrained into the permeable surfaces, these wastewaters have the ability to enter adjacent navigable waters with storm water and tidal actions.

Based on a review of available chemical data, it has been determined that process wastewaters released from the marine railways contain pollutants, some potentially toxic, that may exceed applicable water quality standards once mixed in-stream. Further, the discharges sampled in accord with the current permit were often toxic to the vertebrate and/or invertebrate used in periodic biological toxicity screening.

It has been determined, based on information submitted with discrete sampling events, that sampling has been accomplished by holding a prepared sample container beneath the hull of the vessel as defined process wastewaters fall from the hull of the vessel. This ensures that the wastewater has not contacted underlying permeable surfaces and should reflect the general quality of hull preparation wastewaters.

Based on the determinations noted above, Part I.A. of the permit will continue to recognize the conventional unpaved marine railways as sites of intense industrial activities where the generation and release of defined process wastewaters will be conditionally allowed during the term of the reissued permit. The conditional allowances associated with this determination include regular Part I.A. effluent monitoring, specified industry BMPs and sampling protocol submissions, and other related permit conditions to include biological toxicity testing.

In conclusion, it has been determined that the permittee shall continue to sample process wastewater discharges for specific chemical contaminants and evaluation of biological toxicity at each point where wastewaters are generated. This required information will serve to document the efficiency and effectiveness of BMPs employed during wastewater events and other actions the permittee may take to reduce or eliminate direct uncontrolled discharges of process wastewater from these locations.

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Part I.A. Permit Requirements - Outfalls 001 through 004:

Process wastewaters from the marine railway shall be monitored based on the rationale provided below. The Department has defined process wastewaters generated at vessel repair and maintenance activities as follows:

> Sampling over the life of the permit shall be representative of all the different activities which occur at the permitted outfall including, but not limited to, generated hull process waters, as defined below. The activity from which the process water originated must be specified in the comments section of each submitted discharge monitoring report (DMR) for the outfall, or upon an attachment.
>
> Process wastewater related to hull work shall be any water used on a vessel's hull for any purpose without regard to application pressure, including but not limited to the activities of removing marine salts, sediments, marine growth and paint or other hull cleaning activities using water such as preparing hull areas for inspection or work (cutting, welding, grinding, etc.)

The parameters noted below have been imposed on direct discharges of treated and untreated process wastewater discharges from shipyards associated with vessel repair and maintenance activities.

Sample Type:

A condition of the proposed permit will require the permittee to develop a sampling protocol specific to process wastewaters from the marine railways unique to their facility. This protocol shall be submitted to the TRO for review and approval shortly after permit reissuance.

Location and Frequency of Part I.A. Monitoring:

The permittee currently samples process wastewater at each of the facility's marine railway locations. Based on information presented with the application, the permittee has confirmed that Railway No. 3 (outfall 003) is the location where a majority of the larger repair and maintenance projects are performed.

The current permit requires quarterly wastewater chemical monitoring at outfall 003 (railway 3), and annual chemical monitoring at the other railways (001, 002, 004). The proposed permit will continue quarterly monitoring at the largest, most active railway (003). It is proposed that Part I.A. effluent monitoring at the remaining railways be continued at the current frequency of not less than once per year.

Designated Parameters for Regular Part I.A. Monitoring and Reporting:

Flow: An unlimited standard permit parameter to be reported in millions of gallons per day (MGD). The permittee shall report a daily maximum value for process wastewater on the associated discharge monitoring report (DMR) submitted once per three months (003). A permit condition will require activity-specific information to be reported regarding the nature of wastewater sampled during any stipulated reporting period. When present, daily flow values can be determined by estimation considering the number of pressure washing units, the duration of the wastewater generating event and the volume of water applied by each unit.

ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/ Suitable Data/Antidegradation/Antibacksliding

Designated Parameters for Regular Part I.A. Monitoring and Reporting:

pH	A parameter limited, per the State's water quality standards and current permit, to the range of 6.0 standard units (SU) to 9.0 SU. It is a best professional judgment (BPJ) determination to impose these limitations to protect water quality in the receiving stream. To be sampled once per three months (003) and once per year (001, 002, 004) by a single grab and reported on the DMRs.
Total Suspended Solids (TSS)	An unlimited parameter to be sampled and quantified once per three months (003) and once per year (001, 002, 004) by a single grab and reported on the DMRs. To be reported as parts per million (mg/l). This pollutant is expected to be present in final wastewaters at concentrations in excess of the numeric limit imposed at similar industrial activities (i.e., floating drydocks, TSS limited to 60 mg/l).
Dissolved Copper	This potentially toxic metal, in its bio-available form, is expected to be a component of the final process wastewater from the railway, but will not be addressed by a numeric limitation with this permit's reissuance. This parameter shall be sampled once per three months (003) and once per year (001, 002, 004) by a single grab sample and the data reported, as parts per billion (ug/l), on the DMRs.
Dissolved Zinc	This potentially toxic metal, in its bio-available form, is expected to be a component of the final process wastewater from the railway, but will not be addressed by a numeric limitation with this permit's reissuance. This parameter shall be sampled once per three months (003) and once per year (001, 002, 004) by a single grab sample and the data reported, as parts per billion (ug/l), on the DMRs.
Whole Effluent Toxicity Testing	Due to the toxic nature of defined process wastewaters generated at marine railways (all), biological toxicity testing is recommended at point source locations of industrial wastewater discharge. This issue is discussed in Attachment 8 of the fact sheet.

SUMMARY OF AVAILABLE DMR DATA, PROCESS WASTEWATER
MARINE RAILWAYS (4) VPDES PERMIT NO. VA0087599

OUTFALL	SAMPLE DATE	FLOW (MGD)	pH (SU)	TSS (mg/l)	DIS COPPER (ug/l)	DIS ZINC (ug/l)	TMP (LC50 % effluent Cv/Mb, TRC mg/l, NH_3 mg/l)	DETAILS (vessel, size, pressure)
004	04/2003	0.0010	7.6	77	41	1086		
003	03/04/2004	0.0014	7.7	13	48	2696	Cv >100, Mb 40.6	USCGC, 110', 100 psi
003	05/28/2004	0.0432	7.7	42	170	358	Cv/Mb >100	USN vsl, 100 psi
003	09/29/2004	0.0006	8.2	1433	20700	247	Cv 14.7, Mb <6.25, TRC <QL, NH3 3.2	USN vsl, 3500 psi
004	10/14/2004	0.0216	9.1	548	42550	19230	Cv >100, Mb <6.25, TRC <QL, NH_3 <1	barge 120'x30', 3500 psi
002	11/17/2004	0.0048	7.6	101	24	68	Cv 63.8, Mb <6.25, TRC <QL, NH3 <1	barge 120'x30', 3500 psi
001	12/09/2004	0.0043	8.0	12	14	52	Cv 85.2, Mb 35.4, TRC 0.8, NH_3 <1	barge 150'x35', 3500 psi
003	12/09/2004	0.0043	8.0	4	6	64	Cv >100, Mb 33, TRC 0.5, NH_3 <1	USN barge 135', 3500 psi
003	01/26/2005	0.0144	7.7	2	18	223	Cv 29.7, Mb 9.2,TRC 2.0, NH_3 <1	USN barge
003	05/17/2005	0.0144	7.6	244	1460	194	Cv >100, Mb 26.5, TRC <QL, NH_3 2.2	barge 175'x40', 3000 psi
004	08/15/2005	0.0058	7.9	5	159	563	Cv >100, Mb 82.9, TRC <QL, NH_3 14.3	USN barge110'x35', 3000 psi
003	11/16/2005	0.0144	7.8	213	12	27	Cv/Mb >100, TRC <QL, NH_3 1.2	barge 120'x50'x10', 3000 psi
001	11/21/2005	0.0130	7.8	12	15	137	Cv >100, Mb 29.7, TRC 0.9, NH_3 <1	barge 125'x38'x9', 3000 psi
003	11/21/2005	0.0130	7.7	534	15	65	Cv/Mb >100, TRC <QL, NH_3 1.9	barge 120'x50'x10', 3000 psi
002	11/29/2005	0.0130	8.1	1078	3865	193	Cv 12.5, Mb <6.25, TRC <QL, NH_3 1.5	NOAA RUDE, 90'x22', 3000 psi
003	03/15/2006	0.0014	7.9	4	48	102	Cv 33, Mb 9.5, TRC 1.8, NH_3 <1	USCGC 110'x22', 3000 psi
003	06/05/2006	0.0058	7.6	90	8	100	Cv/Mb >100, TRC <QL, NH_3 1.1	barge 165'x35', 3000 psi
003	08/08/2006	0.0086	7.7	14	56	200	Cv 73.5, Mb 17.7, TRC 0.4, NH_3 <1	unknown
002	10/03/2006	0.0272	8.3	2	219	260	Cv >100, Mb 31.9, TRC 0.2, NH_3 <1	UNSN barge 135'x29', 3000 psi
004	10/16/2006	0.0072	7.8	2	156	709	Cv >100, Mb 93.9, TRC <QL, NH_3 <1	USCGC 87'x19', 3000 psi
001	10/19/2006	0.0072	7.0	1	1	306	Cv/Mb >100, TRC <QL, NH_3 <1	USN barge 110'x32', 3000 psi
003	10/23/2006	0.0058	7.2	9	20	33	Cv >100, Mb 53.6, TRC 0.3, NH_3 <1	barge 140'x50', 3000 psi
003	03/14/2007	0.0144	7.1	83	1	50	Cv >100, Mb 70.7, TRC 0.3, NH_3 <1	barge 140'x50', 3000 psi
003	09/05/2007	0.0050	8.6	76	3621	217		US Army barge 140'x75', 3000 psi
001	10/19/2007	0.0014	7.7	64	10	23	Cv/Mb >100, TRC <QL, NH_3 <1	barge 165'x35', 5000 psi
004	11/09/2007	0.0072	7.4	6	81	1082	Cv >100, Mb 35.4, TRC 0.4, NH_3 <1	USN barge 165'x35', 5000 psi
002	12/17/2007	0.0072	7.9	26	408	2341	Cv >100, Mb 21.3, TRC 0.5, NH_3 <1	USN barge 135'x30'
003	02/07/2008	0.0072	8.1	39	11	344	Cv/Mb >100, TRC <QL, NH_3 <1	barge 150'x50', 3000 psi
003	06/05/2008	0.0072	7.8	16	253	354		barge 195'X35', 3000 psi
003	09/29/2008	0.0072	6.6	8.6	238	163		USN barge 225'x45', 100 psi
001	12/02/2008	0.0014	8.5	80	2	551	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 20	barge VMC 214 195'x35', 400 gal WW
002	12/10/2008	0.0144	8.4	41	12	521	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 21	ANA barge 22'x55', 200 gal WW
003	12/10/2008	0.0050	7.6	43	93	122		barge JCS #2 35'x195', 600 gal WW
004	12/10/2008	0.0050	8.5	29	37	84	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 21	ANA float 8'x20', 200 gal WW
003	02/27/2009	0.0050	6.4	5.4	7	208		Moran barge 3108 260'x60', 500 gal WW
003	06/09/2009	0.0072	8.2	7.4	10	87		SKANSKA crane barge 150'x55', 3000 psi, 700 gal WW
MAXIMUM		0.0432	9.1	1433	42550	19230		
MINIMUM		0.0006	6.4	1	1	23		
AVERAGE		0.0091	7.8	138	2066	918		
COUNT	36	36	36	36	36	36		

SUMMARY OF AVAILABLE DMR DATA, PROCESS WASTEWATER
MARINE RAILWAY/OUTFALL 001 - VA0087599

OUTFALL	SAMPLE DATE	FLOW (MGD)	pH (SU)	TSS (mg/l)	DIS COPPER (ug/l)	DIS ZINC (ug/l)	TMP (LC50 % effluent Cv/Mb, TRC mg/l, NH_3 mg/l)	DETAILS (vessel, size, pressure)
001	12/09/2004	0.0043	8.0	12	14	52	Cv 85.2, Mb 35.4, TRC 0.8, NH_3 <1	barge 150'x35', 3500 psi
001	11/21/2005	0.0130	7.8	12	15	137	Cv >100, Mb 29.7, TRC 0.9, NH_3 <1	barge 125'x38'x9', 3000 psi
001	10/19/2006	0.0072	7.0	1	<1	306	Cv/Mb >100, TRC <QL, NH_3 <1	USN barge 110'x32', 3000 psi
001	10/19/2007	0.0014	7.7	64	10	23	Cv/Mb >100, TRC <QL, NH_3 <1	barge 165'x35', 5000 psi
001	12/02/2008	0.0014	8.5	80	2	551	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 20	barge VMC 214 195'x35', 400 gal WW
MAXIMUM		0.0130	8.5	80	15	551		
MINIMUM		0.0014	7.0	1	<1	23		
AVERAGE		0.0050	7.8	34	8.4	214		
COUNT	5	5	5	5	5	5		

SUMMARY OF AVAILABLE DMR DATA, PROCESS WASTEWATER
MARINE RAILWAY/OUTFALL 002 - VA0087599

OUTFALL	SAMPLE DATE	FLOW (MGD)	pH (SU)	TSS (mg/l)	DIS COPPER (ug/l)	DIS ZINC (ug/l)	TMP (LC50 % effluent Cv/Mb, TRC mg/l, NH_3 mg/l)	DETAILS (vessel, size, pressure)
002	11/17/2004	0.0048	7.6	101	24	68	Cv 63.8, Mb <6.25, TRC <QL, NH3 <1	barge 120'x30', 3500 psi
002	11/29/2005	0.0130	8.1	1078	3865	193	Cv 12.5, Mb <6.25, TRC <QL, NH_3 1.5	NOAA RUDE, 90'x22', 3000 psi
002	10/03/2006	0.0272	8.3	2	219	260	Cv >100, Mb 31.9, TRC 0.2, NH_3 <1	USN barge 135'x29', 3000 psi
002	12/17/2007	0.0072	7.9	26	408	2341	Cv >100, Mb 21.3, TRC 0.5, NH_3 <1	USN barge 135'x30'
002	12/10/2008	0.0144	8.4	41	12	521	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 21	ANA barge 22'x55', 200 gal WW
MAXIMUM		0.0272	8.4	1078	3865	2341		
MINIMUM		0.0048	7.6	2	12	68		
AVERAGE		0.0133	8.1	250	906	677		
COUNT	5	5	5	5	5	5		

SUMMARY OF AVAILABLE DMR DATA, PROCESS WASTEWATER
MARINE RAILWAY/OUTFALL 003 - VA0087599

OUTFALL	SAMPLE DATE	FLOW (MGD)	pH (SU)	TSS (mg/l)	DIS COPPER (ug/l)	DIS ZINC (ug/l)	TMP (LC50 % effluent Cv/Mb, TRC mg/l, NH_3 mg/l)	DETAILS (vessel, size, pressure)
003	03/04/2004	0.0014	7.7	13	48	2696	Cv >100, Mb 40.6	USCGC, 110', 100 psi
003	05/28/2004	0.0432	7.7	42	170	358	Cv/Mb >100	USN vsl, 100 psi
003	09/29/2004	0.0006	8.2	1433	20700	247	Cv 14.7, Mb <6.25, TRC <QL, NH3 3.2	USN vsl, 3500 psi
003	12/09/2004	0.0043	8.0	4	6	64	Cv >100, Mb 33, TRC 0.5, NH_3 <1	USN barge 135', 3500 psi
003	01/26/2005	0.0144	7.7	2	18	223	Cv 29.7, Mb 9.2,TRC 2.0, NH_3 <1	USN barge
003	05/17/2005	0.0144	7.6	244	1460	194	Cv >100, Mb 26.5, TRC <QL, NH_3 2.2	barge 175'x40', 3000 psi
003	11/16/2005	0.0144	7.8	213	12	27	Cv/Mb >100, TRC <QL, NH_3 1.2	barge 120'x50'x10', 3000 psi
003	11/21/2005	0.0130	7.7	534	15	65	Cv/Mb >100, TRC <QL, NH_3 1.9	barge 120'x50'x10', 3000 psi
003	03/15/2006	0.0014	7.9	4	48	102	Cv 33, Mb 9.5, TRC 1.8, NH_3 <1	USCGC 110'x22', 3000 psi
003	06/05/2006	0.0058	7.6	90	8	100	Cv/Mb >100, TRC <QL, NH_3 1.1	barge 165'x35', 3000 psi
003	08/08/2006	0.0086	7.7	14	56	200	Cv 73.5, Mb 17.7, TRC 0.4, NH_3 <1	unknown
003	10/23/2006	0.0058	7.2	9	20	33	Cv >100, Mb 53.6, TRC 0.3, NH_3 <1	barge 140'x50', 3000 psi
003	03/14/2007	0.0144	7.1	83	<1	50	Cv >100, Mb 70.7, TRC 0.3, NH_3 <1	barge 140'x50', 3000 psi
003	09/05/2007	0.0050	8.6	76	3621	217		US Army barge 140'x75', 3000 psi
003	02/07/2008	0.0072	8.1	39	11	344	Cv/Mb >100, TRC <QL, NH_3 <1	barge 150'x50', 3000 psi
003	06/05/2008	0.0072	7.8	16	253	354		barge 195'X35', 3000 psi
003	09/29/2008	0.0072	6.6	8.6	238	163		USN barge 225'x45', 100 psi
003	12/10/2008	0.0050	7.6	43	93	122		barge JCS #2 35'x195', 600 gal WW
003	02/27/2009	0.0050	6.4	5.4	7	208		Moran barge 3108, 260' x 60', barnacle sweep
003	06/09/2009	0.0072	8.2	7.4	10	87		SKANSKA crane barge 150'x55', 3000 psi, 700 gal WW
MAXIMUM		0.0432	8.6	1433	20700	2696		
MINIMUM		0.0006	7.1	2	<1	27		
AVERAGE		0.0093	7.7	144	1340	293		
COUNT	20	20	20	20	20	20		

SUMMARY OF AVAILABLE DMR DATA, PROCESS WASTEWATER
MARINE RAILWAY/OUTFALL 004 - VA0087599

OUTFALL	SAMPLE DATE	FLOW (MGD)	pH (SU)	TSS (mg/l)	DIS COPPER (ug/l)	DIS ZINC (ug/l)	TMP (LC50 % effluent Cv/Mb, TRC mg/l, NH_3 mg/l)	DETAILS (vessel, size, pressure)
004	04/2003	0.0010	7.6	77	41	1086		
004	10/14/2004	0.0216	9.1	548	42550	19230	Cv >100, Mb <6.25, TRC <QL, NH_3 <1	barge 120'x30', 3500 psi
004	08/15/2005	0.0058	7.9	5	159	563	Cv >100, Mb 82.9, TRC <QL, NH_3 14.3	USN barge110'x35', 3000 psi
004	10/16/2006	0.0072	7.8	2	156	709	Cv >100, Mb 93.9, TRC <QL, NH_3 <1	USCGC 87'x19', 3000 psi
004	11/09/2007	0.0072	7.4	6	81	1082	Cv >100, Mb 35.4, TRC 0.4, NH_3 <1	USN barge 165'x35', 5000 psi
004	12/10/2008	0.0050	8.5	29	37	84	Cv/Mb >100, TRC <QL, NH_3 <1, Sal 21	ANA float 8'x20', 200 gal WW
MAXIMUM		0.0216	9.1	548	42550	19230		
MINIMUM		0.0010	7.4	2	37	563		
AVERAGE		0.0080	8.1	111	7171	3792		
COUNT	6	6	6	6	6	6		

ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/ Suitable Data/Antidegradation/Antibacksliding

Storm Water Runoff Associated With Regulated Industrial Activities:

The permittee operates a commercial activity associated with the Standard Industrial Classification codes 3731, 3732, and 4499. Those designations identify ship and boat building and repair, and the operation of marine railways for drydocking of vessels. These same SIC codes are identified and regulated by the EPA's Multi-Sector General Storm Water Permit, and the related State regulation 9 VAC 25-151-10 et seq.

Therefore, all storm water discharges at the facility are regulated under both the Federal and State storm water permit programs.

Marine Railways:

The current permit does not require chemical monitoring or biological toxicity testing at any marine railway location. In lieu of site specific monitoring, the permit requires the continual application of suitable and appropriate BMPs to ensure storm water runoff through each railway point source remains uncontaminated to the maximum extent practicable.

In addition, the presence of defined process wastewaters are prohibited at those locations during representative precipitation events since the different flows cannot be effectively separate prior to release.

Determination:

Based on Department determinations regarding storm water runoff at shipyards operating marine railways, and the expectation that runoff will entrain and convey pollutants to the nearby receiving stream, it has been determined that affected permittees shall now monitor storm water at these locations during the term of reissued permits.

It has been determined that permittees operating marine railways will develop a storm water sampling protocol for submission to the TRO for review and approval prior to initiating periodic sampling at a suitable frequency.

It has been determined that the facility's Railway Number 3 (003) is the most capable and active in terms of hauling capacity and level of industrial activities. It has been determined that storm water monitoring will be limited to outfall 003, as outfall 903, and that an annual grab sample of representative storm water runoff is necessary at permit reissuance that conforms to sampling protocols to be developed by the permittee and approved by the Department (Attachment 7).

Designated Parameters for Regular Part I.A. Monitoring and Reporting - Outfall 903:

Flow:	An unlimited parameter to be reported as millions of gallons (MG) per storm event from which samples are taken. Flow shall be calculated based on the amount of storm water received and the area of the facility being drained by this conveyance. Other monitoring and reporting requirements may be required by the Storm Water Management portion of the permit (Part I.D.). This parameter is reported once per year.

ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/ Suitable Data/Antidegradation/Antibacksliding

Designated Parameters for Regular Part I.A. Monitoring and Reporting - Outfall 903:

pH:	To be monitored and reported to document a parameter addressed by the State's water quality standards. To be reported once per year as a maximum and minimum value, as Standard Units.
Total Suspended Solids (TSS):	This unlimited parameter is to be monitored once per year and reported as parts per million (mg/l). Analysis and reporting of this parameter will serve to confirm that the permittee is taking all prudent and reasonable precautions (BMPs, filtration, etc.) to prevent, to the maximum extent practicable, the discharge of solids and other deleterious substances to State waters along with precipitation runoff.
Total Petroleum Hydrocarbons (TPH):	This unlimited parameter is to be monitored once per year and reported as parts per million (mg/l). Continued analysis and reporting of this parameter will serve to confirm that the permittee is taking all reasonable precautions (BMPs, filtration, source reduction, etc.) to prevent, to the maximum extent practicable, the discharge of petroleum products, oils, greases and lubricants and/or other deleterious substances to State waters along with precipitation runoff.
Dissolved Copper and Dissolved Zinc:	These unlimited parameters are to be monitored once per year and reported as parts per billion (ug/l). These potentially toxic heavy metals are expected to be present in site runoff as the site is unpaved and the surfaces near the point of collection are unpaved and comprised of spent blast material and other debris associated with industrial activities at the site.
Biological Toxicity Testing:	Refer to Attachment 8 for determination in this regard.

Upland Facility Storm Water Conveyance:

During recent facility clean-up activities, a storm water drop inlet structure was uncovered. This location of storm water collection was not previously identified as part of any permit application. The location of this structure is near the facility's main access road, roughly centered between several buildings and industrial areas. Based on information presented in the application, this point of storm water collection and conveyance is associated with a regulated industrial activity and will be incorporated into the terms and conditions of the reissued permit.

Drainage into this drop inlet structure mixes with storm water runoff from Shipwright Street located in the dedicated right-of-way maintained by the City of Portsmouth, Virginia.

In order to complete EPA Form 2F, the permittee obtained samples of site runoff as it entered into the drop inlet but prior to commingling with flows entering from the nearby City roadway.

ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/ Suitable Data/Antidegradation/Antibacksliding

Upland Facility Storm Water Conveyance: (continued)

Determination:

The new point of storm water collection lies within an area where industrial activities may be performed. This location is also where vehicle traffic enters the facility and where inter-facility traffic may routinely transit. The portion of the facility where the structure lies is unpaved and appears to be an accumulation of spent abrasive material and debris associated with industrial activities at the site. A recent photograph indicates that structure protection, in the form of hay bales wrapped with filter fabric (landscape fabric), is present.

As shipyard operations may periodically occur at or near the location of the drop inlet, it has been determined that the discharge point is associated with a regulated industrial activity and representative sampling will be required as part of the reissued permit. This new outfall will be designated outfall 005.

Based on a review of chemical and biological toxicity test data, it has been determined that the Part I.A. effluent sampling frequency should be not less than once per six months (semi-annual). The overall quality of the site's runoff will be further evaluated at the next reissuance in order to determine if a Storm Water Management Evaluation will be required.

Designated Parameters for Regular Part I.A. Monitoring and Reporting - Outfall 005:

Flow:	An unlimited parameter to be reported as millions of gallons (MG) per storm event from which samples were obtained. If site runoff commingles with other drainage from off-site sources and/or if sampling at outfall's end of pipe cannot be accomplished, the required samples shall be taken at a point prior to the site runoff commingling with other flows. Flow shall be calculated based on the amount of precipitation received and the area of the facility being drained by this conveyance. Other monitoring and reporting requirements may be required by the Storm Water Management portion of the permit (Part I.D.). This parameter is reported once per six months (semi-annual).
pH:	To be monitored and reported to document a parameter addressed by the State's water quality standards. To be reported once per six months as a maximum and minimum value, as Standard Units.
Total Suspended Solids (TSS):	This unlimited parameter is to be reported as parts per million (mg/l). Analysis and reporting of this parameter will serve to confirm that the permittee is taking all prudent and reasonable precautions (BMPs, filtration, etc.) to prevent, to the maximum extent practicable, the discharge of solids and other deleterious substances to State waters along with precipitation runoff. This parameter is reported once per six months (semi-annual).

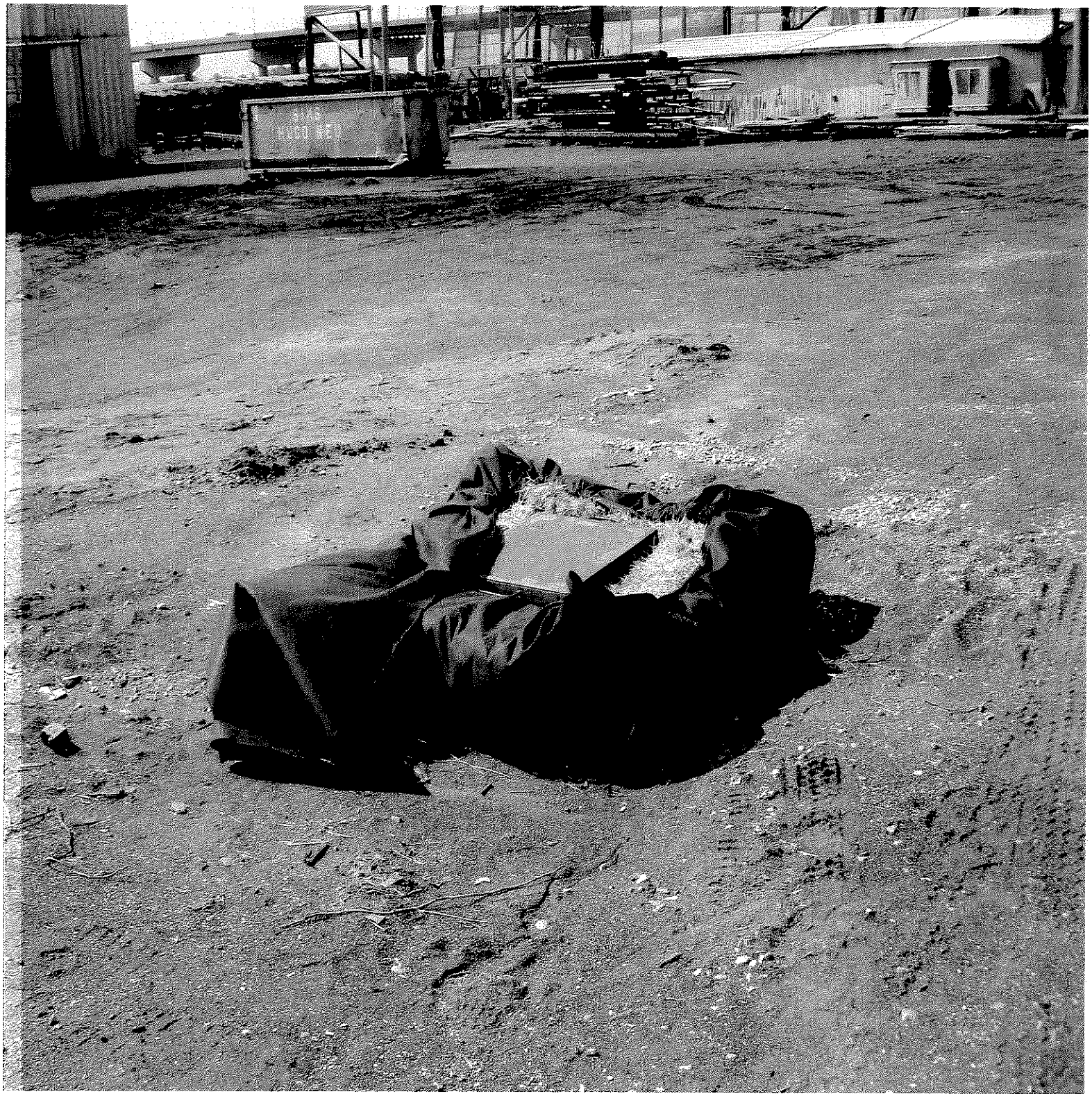
ATTACHMENT 6
Effluent Limitations/Monitoring Rationale/ Suitable Data/Antidegradation/Antibacksliding

Designated Parameters for Regular Part I.A. Monitoring and Reporting - Outfall 005:

Total Petroleum Hydrocarbons (TPH):	This unlimited parameter is to be reported as parts per million (mg/l). Continued analysis and reporting of this parameter will serve to confirm that the permittee is taking all reasonable precautions (BMPs, filtration, source reduction, etc.) to prevent, to the maximum extent practicable, the discharge of petroleum products, oils, greases and lubricants and/or other deleterious substances to State waters along with precipitation runoff. This parameter is reported once per six months (semi-annual).
Dissolved Copper and Dissolved Zinc:	These unlimited parameters are to be reported as parts per billion (ug/l). These potentially toxic heavy metals are expected to be present in site runoff as the site is unpaved and the surfaces near the point of collection are unpaved and comprised of spent blast material and other debris associated with industrial activities at the site. This parameter is reported once per six months (semi-annual).
Biological Toxicity Testing:	Refer to Attachment 8 for determination in this regard.

Location and Frequency of Part I.A. Monitoring:

The frequency of monitoring at this point source location is proposed at once per six months (semi-annual). Samples shall be taken of a representative storm event of greater than 0.10" precipitation, 72 hours after the last storm event of 0.10" or greater. The sample shall be taken as it enters the drop inlet, but prior to commingling with any other flows that may be present in the conveyance leading to outfall 005.



ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC	(not PWS)		ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
METALS													
Antimony	-	-	4,300	No Data Available	-	-	430	-	-	NA			
Arsenic	69	36	-	NDA	17.2	9	-	138	1800	NA			
Cadmium	40	8.8	-	NDA	10	2.2	-	80	440	NA			
Chromium VI	1100	50	-	NDA	275	12.5	-	2200	2500	NA			
Copper	16.3	10.5	-	NDA	4.1	2.6	-	32.6	525	NA			
Lead	240	9.3	-	NDA	60	2.3	-	480	465	NA			
Mercury	1.8	0.94	0.051	NDA	0.45	0.23	0.005	3.6	47	NA			
Nickel	74	8.2	4,600	NDA	18.5	2.1	460	148	410	NA			
Selenium	300	71	11,000	NDA	75	17.7	1100	600	3550	NA			
Silver	2.0	-	-	NDA	0.5	-	-	4	-	NA			
Zinc	90	81	69,000	NDA	22.5	20.2	6900	180	4050	NA			
PESTICIDES/PCB'S													
Aldrin	1.3	-	0.0014	NDA	0.32	-	0.00001	2.6	-	NA			
Chlordane	0.09	0.004	0.022	NDA	0.02	0.001	0.002	0.18	-	NA			
Chlorpyrifos (Dursban)	0.011	0.0056	-	NDA	0.002	0.001	-	0.022	-	NA			
DDD	-	-	0.0084	NDA	-	-	0.0008	-	-	NA			
DDE	-	-	0.0059	NDA	-	-	0.0006	-	-	NA			
DDT	0.13	0.001	0.0059	NDA	0.03	0.0002	0.0006	0.26	-	NA			
Demeton	-	0.1	-	NDA	-	0.025	-	-	-	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA (not PWS)	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC			ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
Dieldrin	0.71	0.0019	0.0014	NDA	0.18	0.0005	0.0001	1.4	0.09	NA			
Alpha-Endosulfan	0.034	0.0087	240	NDA	0.008	0.002	24	0.07	0.43	NA			
Beta-Endosulfan	0.034	0.0087	240	NDA	0.008	0.002	24	0.07	0.43	NA			
Endosulfan-Sulfate	-	-	240	NDA	-	-	24	-	-	NA			
Endrin	0.037	0.0023	0.81	NDA	0.009	0.0006	0.08	0.07	0.11	NA			
Endrin Aldehyde	-	-	0.81	NDA	-	-	0.08	-	-	NA			
Guthion	-	0.01	-	NDA	-	0.0025	-	-	-	NA			
Heptachlor	0.053	0.0036	0.0021	NDA	0.013	0.0009	0.0002	0.11	0.18	NA			
Heptachlor Epoxide	0.053	0.0036	0.0011	NDA	0.013	0.0009	0.0001	0.11	0.18	NA			
Hexachlorocyclo-hexane (Lindane)	0.16	-	0.63	NDA	0.04	-	0.06	0.32	-	NA			
Hexachlorocyclo-hexane Alpha-BHC	-	-	0.13	NDA	-	-	0.01	-	-	NA			
Hexachlorocyclo-hexane Beta-BHC	-	-	0.46	NDA	-	-	0.05	-	-	NA			
Kepone	-	0	-	NDA	-	0	-	-	0	NA			
Malathion	-	0.1	-	NDA	-	0.025	-	-	5	NA			
Methoxychlor	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
Mirex	-	0	-	NDA	-	0	-	-	0	NA			
PCB-1242	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
PCB-1254	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
PCB-1221	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
PCB-1232	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
PCB-1248	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
PCB-1260	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA (not PWS)	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC			ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
PCB-1016	-	0.03	-	NDA	-	0.007	-	-	1.5	NA			
Toxaphene	0.21	0.0002	0.0075	NDA	0.05	0.00005	0.0008	0.42	0.01	NA			
BASE NEUTRAL EXTRACTABLES, VOLATILES, ACIDS EXTRACTABLES													
Acenaphthene	-	-	2,700	NDA	-	-	270	-	-	NA			
Acrolein	-	-	780	NDA	-	-	78	-	-	NA			
Acrylonitrile	-	-	6.6	NDA	-	-	0.66	-	-	NA			
Anthracene	-	-	110,000	NDA	-	-	11000	-	-	NA			
Benzene	-	-	710	NDA	-	-	71	-	-	NA			
Benzidine	-	-	0.0054	NDA	-	-	0.0005	-	-	NA			
Benzo(a) anthracene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Benzo(b) fluoranthene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Benzo(k) fluoranthene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Benzo(a)pyrene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Bis-2-Chloroethyl Ether	-	-	14	NDA	-	-	1.4	-	-	NA			
Bis-2-Chloro-isopropyl Ether	-	-	170,000	NDA	-	-	17000	-	-	NA			
Bromoform	-	-	3,600	NDA	-	-	360	-	-	NA			
Butyl benzyl phthalate	-	-	5,200	NDA	-	-	520	-	-	NA			
Carbon tetrachloride	-	-	44	NDA	-	-	4.4	-	-	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA (not PWS)	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC			ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
Chrysene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Chlorobenzene	-	-	21,000	NDA	-	-	2100	-	-	NA			
Chlorodibromo-methane	-	-	340	NDA	-	-	34	-	-	NA			
Chloroform	-	-	29,000	NDA	-	-	2900	-	-	NA			
2-Chloronaphthalene	-	-	4,300	NDA	-	-	430	-	-	NA			
2-Chlorophenol	-	-	400	NDA	-	-	40	-	-	NA			
Dibenz(a,h) anthracene	-	-	0.49	NDA	-	-	0.05	-	-	NA			
Dibutyl phthalate	-	-	12,000	NDA	-	-	1200	-	-	NA			
Dichloromethane	-	-	16,000	NDA	-	-	1600	-	-	NA			
1,2-Dichloro-benzene	-	-	17,000	NDA	-	-	1700	-	-	NA			
1,3-Dichloro-benzene	-	-	2,600	NDA	-	-	260	-	-	NA			
1,4-Dichloro-benzene	-	-	2,600	NDA	-	-	260	-	-	NA			
3,3 Dichloro-benzidine	-	-	0.77	NDA	-	-	0.08	-	-	NA			
Dichlorobromo-methane	-	-	460	NDA	-	-	46	-	-	NA			
1,2-Dichloro-ethane	-	-	990	NDA	-	-	99	-	-	NA			
1,1-Dichloro-ethylene	-	-	17,000	NDA	-	-	1700	-	-	NA			
1,2-trans-dichloroethylene	-	-	140,000	NDA	-	-	14000	-	-	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA (not PWS)	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC			ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
2,4 Dichlorophenol	-	-	790	NDA	-	-	79	-	-	NA			
1,2-Dichloropropane	-	-	390	NDA	-	-	39	-	-	NA			
1,3-Dichloropropene	-	-	1,700	NDA	-	-	170	-	-	NA			
Diethyl phthalate	-	-	120,000	NDA	-	-	12000	-	-	NA			
Di-2-Ethylhexyl phthalate	-	-	59	NDA	-	-	5.9	-	-	NA			
2,4 Dimethylphenol	-	-	2,300	NDA	-	-	230	-	-	NA			
Dimethyl Phthalate	-	-	2,900,000	NDA	-	-	290000	-	-	NA			
Di-n-Butyl Phthalate	-	-	12,000	NDA	-	-	1200	-	-	NA			
2,4 Dinitrophenol	-	-	14,000	NDA	-	-	1400	-	-	NA			
2-Methyl-4,6-Dinitrophenol	-	-	765	NDA	-	-	76.5	-	-	NA			
2,4-Dinitro-toluene	-	-	91	NDA	-	-	9.1	-	-	NA			
1,2-Diphenyl-hydrazine	-	-	5.4	NDA	-	-	0.54	-	-	NA			
Ethylbenzene	-	-	29,000	NDA	-	-	2900	-	-	NA			
Fluoranthene	-	-	370	NDA	-	-	37	-	-	NA			
Fluorene	-	-	14,000	NDA	-	-	1400	-	-	NA			
Hexachlorobenzene	-	-	0.0077	NDA	-	-	0.0008	-	-	NA			
Hexachlorobutadiene	-	-	500	NDA	-	-	50	-	-	NA			
Hexachlorocyclo-pentadiene	-	-	17,000	NDA	-	-	1700	-	-	NA			
Hexachloroethane	-	-	89	NDA	-	-	8.9	-	-	NA			
Indeno (1,2,3-cd) pyrene	-	-	0.49	NDA	-	-	0.05	-	-	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA (not PWS)	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC			ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
Isophorone	-	-	26,000	NDA	-	-	2600	-	-	NA			
Methyl Bromide	-	-	4,000	NDA	-	-	400	-	-	NA			
Nitrobenzene	-	-	1,900	NDA	-	-	190	-	-	NA			
N-Nitrosodimethyl-amine	-	-	81	NDA	-	-	8.1	-	-	NA			
N-Nitrosodiphenyl-amine	-	-	160	NDA	-	-	16	-	-	NA			
N-Nitrosodi-n-propylamine	-	-	14	NDA	-	-	1.4	-	-	NA			
Pentachloro-phenol	13	7.9	82	NDA	8.2	1.9	8.2	26	395	NA			
Phenol	-	-	4.6E6	NDA	-	-	4.6E5	-	-	NA			
Pyrene	-	-	11,000	NDA	-	-	1100	-	-	NA			
1,1,2,2-Tetrachloroethane	-	-	110	NDA	-	-	11	-	-	NA			
Tetrachloro-ethylene	-	-	89	NDA	-	-	8.9	-	-	NA			
Toluene	-	-	200,000	NDA	-	-	20000	-	-	NA			
1,2,4 Trichloro-benzene	-	-	940	NDA	-	-	94	-	-	NA			
1,1,2-Trichloroethane	-	-	420	NDA	-	-	42	-	-	NA			
Trichloroethylene	-	-	810	NDA	-	-	81	-	-	NA			
2,4,6-Trichloro-phenol	-	-	65	NDA	-	-	6.5	-	-	NA			
Vinyl Chloride	-	-	61	NDA	-	-	6.1	-	-	NA			

ANTIDEGRADATION CALCULATIONS/BASELINES

All values in ug/l unless otherwise noted.

PARAMETER	SALTWATER CRITERIA (SW)		OTHER SURFACE WATERS CRITERIA	INSTREAM BACKGROUND DATA	ANTIDEGRADATION BASELINE			WATER QUALITY WASTE LOAD ALLOCATION (WQ-WLA)			ANTIDEGRADATION WASTE LOAD ALLOCATION (AD-WLA) [Tier I waters -N/A]		
	ACUTE	CHRONIC	(not PWS)		ACUTE	CHRONIC	HUMAN HEALTH	ACUTE	CHRONIC	HUMAN HEALTH			
MISCELLANEOUS													
Ammonia (mg/l)	3.37	0.51	-	NDA	0.84	0.13	-	6.7	25.5	NA			
Chlorine Produced Oxidant (mg/l)	13	7.5	-	NDA	3.2	1.9	-	26	375	NA			
Cyanide	1	1	220,000	NDA	0.25	0.25	22000	2	50	NA			
Dioxin	-	-	1.2	NDA	-	-	0.12	-	-	NA			
Fecal Coliform (N/CML)	-	-	-	NDA	-	-	-	-	-	NA			
Hydrogen Sulfide	-	2	-	NDA	-	-	-	-	100	NA			
Tributyltin	0.38	0.001	-	NDA	0.09	0.0002	-	0.76	0.05	NA			

NOTES:

(*) For TBT, the current limitation of 0.05 ug/l shall continue as it was developed from the most stringent water quality standard in-place at the time of imposition. This action conforms to a portion of the current TBT control strategy for the receiving stream.

EXAMPLE: SALT WATER

Zinc WQSa = 95 ug/l WQSc = 86 ug/l WQSh = NA Background (expected value)= 15 ug/l

Unused capacity

acute = 95 - 15 = 80

chronic = 86 - 15 = 71

AD BASELINE

Acute & Chronic = 25% (WQ Standard - Instream Background) + Instream Background

Acute = 0.25(95 - 15) + 15 or 0.25(80) + 15 = 35

Chronic = 0.25(86 - 15) + 15 or 0.25(71) + 15 = 32.75

Human Health = 10% (WQ Standard - Instream Background) + Instream Background

Human Health = NA

WASTE LOAD ALLOCATIONS

WQ-WLAa = (2 X WQSa) - background = (2 X 95) - 15 = 175

WQ-WLAc = (50 X WQSc) - (49 X background) = (50 X 86) - (49 X 15) = 3565

WQ-WLAh = NA

AD-WLAa = (50 X 35) - 15 = 1735

AD-WLAc = (50 X 32.75) - 15 = 1622.5

AD-WLAh = NA

NOTES: The most stringent WLAs (WQ-WLAa, 175; AD-WLAc, 1622.5) are used in the computer model for determination of limits.

When calculating the AD-WLA for saltwater discharges, use 50 times the acute, chronic and human health standards as antidegradation applies outside the mixing zones

ATTACHMENT 7

SPECIAL CONDITIONS RATIONALE

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. Permit Reopeners

a. Water Quality Standards Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

b. Nutrient Enriched Waters Reopener

Rationale: The Policy for Nutrient Enriched Waters, 9 VAC 25-40 -10 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future total phosphorus and total nitrogen limits may be needed.

c. Total Maximum Daily Load (TMDL) Reopener

Rationale: For specified waters, Section 303(d) of the Clean Water Act requires the development of total maximum daily loads necessary to achieve the applicable water quality standards. The TMDL must take into account seasonal variations and a margin of safety. In addition, Section 62.1-44.19:7 of the State Water Control Law requires the development and implementation of plans to address impaired waters, including TMDLs. This condition allows for the permit to be either modified or, alternatively, revoked and reissued to incorporate the requirements of a TMDL once it is developed. In addition, the reopener recognizes that, in according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under Section 303 of the Act.

2. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for existing manufacturing, commercial mining and silvicultural discharges.

3. Quantification Levels Under Part I.A.

Rationale: States are authorized to establish monitoring methods and procedures to compile and analyze data on water quality, as per 40 CFR part 130, Water Quality Planning and Management, subpart 130.4. Section b. of the special condition defines QL and is included per BPJ to clarify the difference between QL and MDL.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS (continued)

4. Compliance Reporting Under Part I.A.

Rationale: Defines reporting requirements for toxic parameters and some conventional parameters with quantification levels to ensure consistent, accurate reporting on submitted reports.

5. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.18:2, authorizes the Board to prohibit any waste discharge which would threaten public health or safety, interfere with or be incompatible with treatment works or water use. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

6. Industrial Activities and Process Wastewater Discharges

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 I., allows for specific effluent sampling protocols to be defined and required by VPDES permits. In addition, the Board may require certain operational practices to maintain water quality through the VPDES permit, and to obtain certain information to determine compliance with the permit and/or to better understand process operations that may lead to water quality problems over the 5-year term of the reissued permit.

Additional Discussion: Shipyard process wastewaters have been defined by the Department and this definition has been placed into VPDES permits issued to industrial activities operating under SIC codes 3731, 3732, and 4499. This condition also:

1) requires the permittee to develop site-specific process wastewater and storm water runoff sampling protocols for submission and approval from the DEQ staff, 2) requires permittee to provide advanced notification of process wastewater events at all railways, 3) addresses potential for precipitation runoff to be a component of process wastewaters at the time of sampling, 4) identifies specific information that the permittee shall provide detailing the industrial activities resulting in generation of process wastewater sampled.

7. Best Management Practices (BMPs)

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

Additional Discussion: The DEQ developed a suite of industry specific BMPs for use in VPDES Permits issued to ship repair and maintenance facilities. When necessary and appropriate, these BMPs are amended to reflect site specific conditions and/or concerns. The BMPs now address allowed vessel discharges under the UNDS and EPA VGP.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.B. OTHER REQUIREMENTS OR SPECIAL CONDITIONS (continued)

8. Tributyltin (TBT) Exclusion

Rationale: The permittee maintains that the facility does not perform maintenance or repair upon vessels coated with detectable amounts of tributyltin in either anti-foulants or other hull coatings. It is a BPJ determination to prohibit the use (application and/or removal) of TBT at this facility in lieu of requiring sampling and other permit special conditions regarding its use during the term of the reissued permit.

I.C. TOXICS MANAGEMENT PROGRAM (TMP)

Rationale: To determine the need for pollutant specific and/or whole effluent toxicity limits as may be required by the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44 (d). See Attachment 8 of this fact sheet for additional justification.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.D. STORM WATER MANAGEMENT CONDITIONS

1. Sampling Methodology for Outfall 005

Rationale: Defines methodology for collecting representative effluent samples in conformance with applicable regulations.

2. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

b. Recording of Results

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (e.g. date and duration event, rainfall measurement, and duration between qualifying events). It also requires the maintenance of daily rainfall logs which are to be reported. This condition is carried over from the previous storm water pollution prevention plan requirements contained in the EPA storm water baseline industrial general permit.

c. Sampling Waiver

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

d. Representative Discharge

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.D. STORM WATER MANAGEMENT CONDITIONS (continued)

e. Quarterly Visual Examination of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

f. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and is consistent with that permit.

g. Allowable Non-Storm Water Discharges

Rationale: The listed allowable non-storm water discharges are the same as those allowed by the EPA in their multi-sector general permit, and are the same non-storm water discharges allowed under the Virginia General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity, 9 VAC 25-151-10 (et seq.). Allowing the same non-storm water discharges in VPDES individual permits provides consistency with other storm water permits for industrial facilities. The non-storm water discharges must meet the conditions in the permit.

3. Storm Water Pollution Prevention Plan

Rationale: The Clean Water Act 402(p) (2) (B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity (Federal Register Sept 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of toxic pollutants listed in Section 307 (a)(1), and hazardous substances listed in Section 311 of the Clean Water Act where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

ATTACHMENT 7
VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS AND RATIONALE

I.D. STORM WATER MANAGEMENT CONDITIONS (continued)

4. Facility-specific Storm Water Management Conditions

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of these conditions is a BPJ determination based on the EPA storm water multi-sector general permit for industrial activities and DEQ's general permit for storm water associated with industrial activities and is consistent with those permits.

Additional Discussion: The conditions at this location reflect the content of the storm water general permit for water transportation and ship repair industries.

ATTACHMENT 8

TOXICS MONITORING/TOXICS REDUCTION/ WET LIMIT RATIONALE

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard Virginia Beach, VA 23462

SUBJECT: Toxics Management Program (TMP) testing for Associated Naval Architects (VA0087599)

TO: Carl Thomas

FROM: Deanna Austin DDA

DATE: 8/1/08

COPIES: TRO File (PPP #43)

Associated Naval Architects (ANA) is a small shipyard located in Portsmouth, VA and has four conventional marine railways. All of the railways and their associated stormwater discharge to the Western Branch of the Elizabeth River. An additional stormwater outfall has been added to the permit as outfall 005. This outfall will be included in the toxicity monitoring program for the reissued permit.

During the current permit cycle (2003-current), toxicity samples were taken at each railway. Outfalls 001, 002, and 004 were monitored annually. These railways are less likely to be used than the railway associated with outfall 003. Outfall 003 was monitored quarterly for the first part of the permit until there were 10 tests taken and then annually for the remainder of the permit term.

The following tables detail the results of the TMP tests for the last permit term.

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	LAB
001	Annual Acute	M.b.	12/9/2004	35.4	0	2.82	
001	Annual Acute	C.v.	12/9/2004	85.2	35	1.17	CBI
001	Annual Acute	M.b.	11/21/2005	29.7	0	3.37	CBI
001	Annual Acute	C.v.	11/21/2005	100	80	1	CBI
001	Annual Acute	M.b.	10/19/2006	100	100	1	CBI
001	Annual Acute	C.v.	10/19/2006	100	100	1	CBI
001	Annual Acute	M.b.	10/19/2007	100	100	1	CBI
001	Annual Acute	C.v.	10/19/2007	100	100	1	CBI

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	LAB
002	Annual Acute	M.b.	11/17/2004	<6.25	0	>16	CBI
002	Annual Acute	C.v.	11/17/2004	63.8	15	1.57	CBI
002	Annual Acute	M.b.	11/29/2005	6.25	0	16	CBI
002	Annual Acute	C.v.	11/29/2005	12.5	0	8	CBI
002	Annual Acute	M.b.	10/3/2006	31.9	0	3.13	CBI
002	Annual Acute	C.v.	10/3/2006	100	55	1	CBI
002	Annual Acute	M.b.	12/17/2007	21.3	0	4.69	CBI
002	Annual Acute	C.v.	12/17/2007	100	65	1	CBI

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	LAB
003	Quarterly Acute	M.b.	3/4/2004	40.6	0	2.46	CBI
003	Quarterly Acute	C.v.	3/4/2004	100	100	1	CBI
003	Quarterly Acute	M.b.	5/28/2004	100	100	1	CBI
003	Quarterly Acute	C.v.	5/28/2004	100	100	1	CBI
003	Quarterly Acute	M.b.	9/29/2004	6.25	0	16	CBI
003	Quarterly Acute	C.v.	9/29/2004	14.7	0	6.8	CBI
003	Quarterly Acute	M.b.	12/9/2004	33	0	3.03	CBI
003	Quarterly Acute	C.v.	12/9/2004	100	100	1	CBI
003	Quarterly Acute	M.b.	1/26/2005	9.2	0	10.87	CBI
003	Quarterly Acute	C.v.	1/26/2005	29.7	0	3.37	CBI
003	Annual Acute	M.b.	5/17/2005	26.5	0	3.77	CBI
003	Annual Acute	C.v.	5/17/2005	100	95	1	CBI
003	Extra Sample	C.v.	11/16/2005	100	95	1	CBI
003	Extra Sample	M.b.	11/16/2005	100	85	1	CBI
003	Extra Sample	C.v.	11/21/2005	100	95	1	CBI
003	Extra Sample	M.b.	11/21/2005	100	100	1	CBI
003	Annual Acute	M.b.	3/15/2006	9.5	0	10.53	CBI
003	Annual Acute	C.v.	3/15/2006	33	0	3.03	CBI
003	Extra Sample	M.b.	6/5/2006	100	100	1	CBI
003	Extra Sample	C.v.	6/5/2006	100	100	1	CBI
003	Extra Sample	M.b.	8/8/2006	17.7	0	5.65	CBI
003	Extra Sample	C.v.	8/8/2006	73.5	10	1.36	CBI
003	Annual Acute-Extra	C.v.	10/23/2006	100	100	1	CBI
003	Annual Acute-Extra	M.b.	10/23/2006	53.6	0	1.87	CBI
003	Annual Acute	M.b.	3/14/2007	70.1	0	1.43	CBI
003	Annual Acute	C.v.	3/14/2007	100	100	1	CBI
003	Extra Sample	C.v.	2/7/2008	100	100	1	CBI
003	Extra Sample	M.b.	2/7/2008	100	95	1	CBI

OUTFALL	DESCRIPT	SPECIES	SAMPLEDT	LC50	SURVIVAL	TU	LAB
004	Annual Acute	M.b.	10/14/2004	<6.25	0	>16	CBI
004	Annual Acute	C.v.	10/14/2004	100	95	1	CBI
004	Annual Acute	M.b.	8/15/2005	82.9	35	1.47	CBI
004	Annual Acute	C.v.	8/15/2005	100	100	1	CBI
004	Annual Acute	M.b.	10/16/2006	93.9	45	1.06	CBI
004	Annual Acute	C.v.	10/16/2006	100	100	1	CBI
004	Annual Acute	M.b.	11/9/2007	35.4	0	2.82	CBI
004	Annual Acute	C.v.	11/9/2007	100	90	1	CBI

C.v. - *Cyprinodon variegatus*
M.b. - *Mysidopsis bahia*, which is now known as *Americamysis bahia*

Data collected during the current permit term has shown a most sensitive species for all outfalls. *Americamysis bahia* (A.b.), formally named *Mysidopsis bahia* is shown to be the most sensitive species. Toxicity testing in the reissued permit for outfalls 001, 002, 003, and 004 will only use species A.b. Also, since A.b. is the most sensitive species, it will be the only species discussed in terms of failure percentage. The LC50 required for this facility is 100% or a TUa of 1.0. Outfalls 001, 002 and 004 had 4

samples taken using A.b. over the permit term. The failure rate was 50%, 100%, and 100% respectively. Outfall 003, which is the railway most often used, and therefore monitored quarterly and then annually after 10 samples for a total of 13 samples using A.b., the failure rate was 64%. DEQTMP guidance document 00-2012 states that a WET limit is to be included in the permit when 25% of the samples taken during the monitoring period exceed the screening level of a LC50 of 100%. All outfalls at ANA failed more than 25% of their samples with LC50s that were less than 100%. The DEQ has chosen not to pursue adding limits to marine railways at this time. Instead DEQ has been working with facilities that have marine railways to come up with a way to capture the water for better testing methods and for the possibility to go to a "no discharge" mode of operation. The railways in the area were tasked with a railway underpaving study during the most recent permit term. DEQ is still working with the shipyard to determine the next step for dealing with railway discharges. Although there are will be no limits imposed at this time, there may be in the future. Additionally, the facility should be developing and implementing best management practices which will help decrease the toxicity potential of their generated wastewater.

The following TMP language is recommended for the reissuance of the Associated Naval Architects permit (VA0087599).

D. TOXICS MANAGEMENT PROGRAM (TMP)

1. Biological Monitoring for outfalls 001, 002, 003, 004 and 005

a. In accordance with the schedule in 2. below, the permittee shall conduct annual acute toxicity tests for the duration of the permit. The permittee shall collect a grab sample of final effluent from outfalls 001, 002, 003, 004 in accordance with the sampling methodology in Part I, B.6. of this permit. The permittee shall collect a grab sample of final effluent from outfall 005 in accordance with the sampling methodology in Part I.D.1.The grab samples for all toxicity testing shall be taken at the same time as the monitoring for the outfalls in Part 1.A. of this permit. The acute test to use for outfalls 001, 002, 003, and 004 is:

48 Hour Static Acute test using Americamysis bahia

The acute tests to use for outfall 005 are:

48 Hour Static Acute test using Americamysis bahia and
48 Hour Static Acute test using Cyprinodon variegatus

These acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for the calculation of a valid LC_{50}. Express the results as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for reporting. Both species should be analyzed from grab samples collected during the same sampling event.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

b. In the event that sampling of any of the outfalls is not possible due to the absence of effluent flow during a particular testing period, the permittee shall perform a make-up sample during the next testing period.

c. The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of the effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

c. The test dilutions shall be able to determine compliance with the following endpoints:

(1) Acute LC_{50} of 100% equivalent to a TU_a of 1.0

2. Reporting Schedule

The permittee shall report the results and supply **one** complete copy of the toxicity test reports to the

Tidewater Regional Office in accordance with the schedule below. A complete report must contain a copy of all laboratory benchsheets, certificates of analysis, and all chains of custody. All data shall be submitted by the 10th of the month following sampling. Attachment A must be submitted with all reports.

(a)	**Conduct first annual TMP test for outfalls 001, 002, 003, and 004 using Americamysis bahia (A.b.)** **Conduct first annual TMP for outfall 005 using Americamysis bahia (A.b.) and Cyprinodon variegatus (C.v.)**	**By December 31, 2009**
(b)	**Submit results of all biological tests**	**Within 60 days of the sample date and no later than January 10, 2010**
(c)	**Conduct subsequent annual TMP tests for outfalls 001, 002, 003 and 004 using A.b.** **Conduct subsequent annual TMP tests for outfall 005, using A.b. and C.v.**	**By December 31, 2010, 2011, and 2012**
(d)	**Submit subsequent annual biological tests**	**Within 60 days of the sample date and no later than January 10, 2011, 2012, and 2013**

ATTACHMENT A

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

TMP SUBMITTAL COVER SHEET

This form shall be completed for, and submitted with, each report of toxicity testing.

VPDES PERMIT NUMBER: VA0087599

FACILITY NAME: Associated Naval Architects

	THIS REPORT SHALL CONTAIN THE FOLLOWING ITEMS
	COMPLETED CHAIN OF SAMPLE CUSTODY
	CERTIFICATE OF ANALYSIS(ES)
	COMPLETE REPORT OF TOXICITY TESTING

FACILITY LOCATION: 3400 Shipwright St. Portsmouth, VA 23703

OUTFALL NUMBER (circle one): 001 002 003 004 005

REPORTING PERIOD (ex: 2009 Annual): _____

SAMPLE TYPE (circle one): Stormwater Wastewater

WASTEWATER SOURCE(S) (if process wastewater/hydrostatic test water, provide a brief source description):

_____

_____

STORM EVENT INFORMATION (if applicable):

Sample Date and Time of Collection: _____

Time discharge began: _____

Storm event measurement (inches): _____

Time between sampling and
last measurable storm event (hours): _____

ADDITIONAL INFORMATION:

If this sample is a **make-up** sample or a **retest**, indicate which category of test and the reporting period this submittal applies to:

Report Type: (i.e., makeup, retest, etc.) _____

Reporting Period: _____

If the required TMP sample(s) were not collected provide a reason/rationale:

_____

CERTIFICATION:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____

Signature, printed name and title of Principal Officer or Authorized Agent / Date

ATTACHMENT 9

MATERIAL STORED

ATTACHMENT 9
MATERIALS STORED

General Discussion:

A complete listing of all of the materials used in the permittee's process operations, both solid and liquid, will not be identified in this section of the fact sheet. Based on the industrial activities typically performed at shipyards and vessel repair locations, the following materials could be present at any particular time during the five-year term of the reissued permit. Due to a limited amount of available land area, some materials are expected to be brought to the facility on an as-needed basis, from local suppliers.

Typical shipyard materials include, but are not limited to the following:

Petroleum products & liquids – fuels (gas, diesel oil), lubricants, waste oil and petroleum products, tank cleaning wastes and materials, off-spec products, antifreeze, etc.

Abrasive blast material – CrystalGrit©, black beauty, spent ABM, etc.

Metal products and alloy materials - plate steel, aluminum, stainless steel, wiring, piping, brass, bronze, welding rods, zinc anodes waste and scrap, etc.

Coatings – anti-foulants (biocide-free, biocide laced), anti-corrosive, epoxies, paint containers, drop cloths, waste application devices (rollers, brushes, rags, etc.), solvents, and all manner and types of wastes associated with and resulting from coating operations.

Assorted materials – batteries, wood, paper, cardboard, packaging, foam, insulation, waste and scrap.

Based on the terms of the current permit, the recent application and past inspection reports, the permittee is believed to impose all suitable and appropriate best management practices and required petroleum handling, storage and disposal practices and procedures to reduce or eliminate to the maximum extend practicable the unrecoverable loss of any materials used, stored or otherwise handled at this facility.

ATTACHMENT 10

RECEIVING WATERS INFO./ TIER DETERMINATION/STORET DATA/ STREAM MODELING

MEMORANDUM
DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE

Water Permits Section
5636 Southern Boulevard
Virginia Beach, Virginia 23462

SUBJECT: VPDES Application Requests

TO: Stephen Cioccia, TRO

FROM: C.D. Thomas, TRO

DATE: June 2, 2008

COPIES: TRO/File (00043, P-PP)

An application has been received for the following facility:

Associated Naval Architects, Incorporated, Portsmouth, Virginia

Topo Map Name: Norfolk South Topo VPDES PERMIT NO.: VA0087599

Receiving Stream: Western Branch of the Elizabeth River

☑ **Attached is a Topographic Map showing facility boundaries and outfall location(s).**

☑ **Attached is a STORET Request Form if STORET data is requested.**

The following information is requested from TRO Planning:

1. X Tier Determination. Tier: 1 (discharge to impaired receiving stream)
(Please include a basis for the tier determination.) Attachment 1

2. X STORET Data and STORET Station Location(s).
Returned as e-mail: ELI data for AssocNaval/Arch. xls

3. X Is this facility mentioned in a Management Plan?
✓ No _____ Yes _____ No, but will be included when the Plan is updated.

4. X Are limits contained in a Management Plan?
✓ No _____ Yes **(If Yes, Please include the basis for the limits.)**

5. X Does this discharge go to a 303(d) stream segment?
_____ No ✓ Yes **(If Yes, Please include the basis for the limits.)**
See Attachment 1

Return Due Date: OPEN Date Returned: 6/11/08

STORET Station: 2-ELD01

STORET Station: _____

DATA RETRIEVAL REQUEST FORM

REQUESTED BY: C. Thomas **DATE REQUESTED:** June 2, 2008

TARGET STREAM: Western Branch Elizabeth River

VPDES PERMIT No.: VA0085799 **FACILITY NAME:** Associated Naval Architects, Incorporated, Chesapeake, Virginia 23320

DATA STATION LOCATION

(IF STATION IS NOT KNOWN, MUST ATTACH TOPO MAP WITH TARGET AREA and/or OUTFALL(s) LOCATION CLEARLY MARKED)

LIST REQUESTED STATION(s) BELOW: - OR - (FORMAT = BASIN CODE, STREAM CODE, MILEAGE (e.g. 2-JMS005.72))

ELD01 - CBP Data			

PERIOD OF DATA RECORD: No. Years of Data: Last Three (3) Years

TYPE of RETRIEVAL REQUESTED (Must Check One):

___ **ALL PARAMETERS:**
YIELDS RAW DATA FOR ALL PARAMETERS SAMPLED, EACH ENTRY ROW BY SAMPLE DATE (*YIELDS LENGTHY REPORT*).

☑ **SPECIFIC PARAMETERS:**
TABULAR LISTING of RAW DATA BASED on SPECIFIED PARAMETERS (SPECIFY PARAMETERS NEEDED FROM FOLLOWING).

PARAMETER(s) REQUESTED
(*CHECK PARAMETERS FROM THE LIST BELOW, Default Medium is Water*)

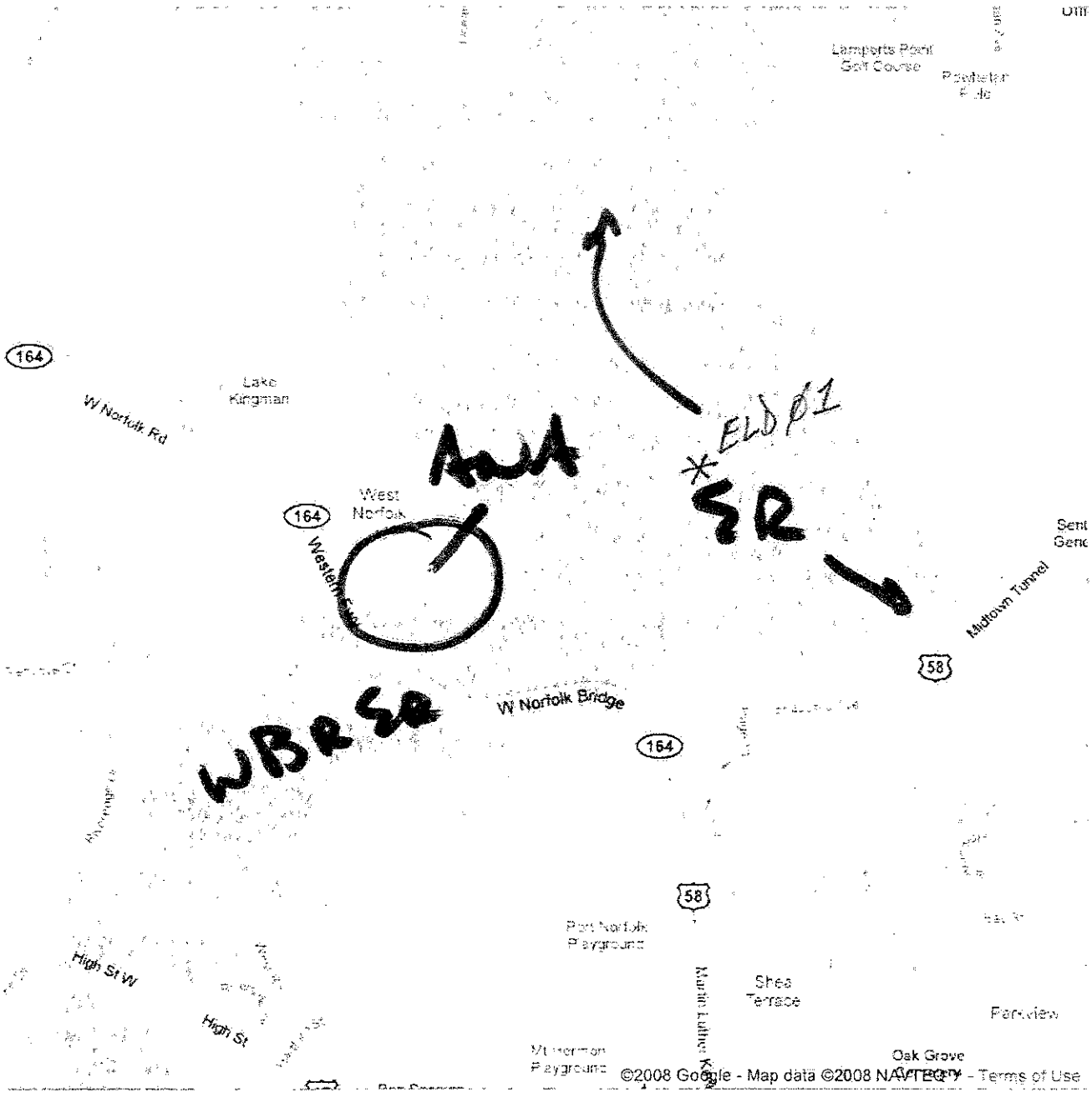
- ☑ 00010 WATER TEMP CENT
- ☑ 00070 TURBIDITY
- ☑ 00078 TURBIDITY (Secchi)
- ___ 00094 CONDUCTIVITY (Field)
- ___ 00095 CONDUCTIVITY (Lab)
- ☑ 00096 SALINITY @ 25C (480, PPT)
- ___ 00299 DO PROBE
- ☑ 00300 DO
- ___ 00310 BOD 5-DAY
- ☑ 00400 pH (Field)
- ___ 00530 TSS (Tot Susp Solids)
- ___ 00608 AMMONIA DISSOLVED
- ___ 00610 NH3+NH4, N TOTAL
- ___ 00615 NO2-N, TOTAL
- ___ 00620 NO3-N, TOTAL
- ___ 00625 TOTAL KJEL N
- ___ 00665 TOTAL PHOSPHORUS
- ___ 00900 TOT. HARDNESS
- ___ 00940 TOT. CHLORIDE
- ☑ 01000 DISS. ARSENIC
- ☑ 01025 DISS. CADMIUM
- ☑ 01040 DISS. COPPER
- ☑ 01049 DISS. LEAD
- ☑ 01065 DISS. NICKEL
- ☑ 01075 DISS. SILVER
- ☑ 01090 DISS. ZINC
- ___ 01002 TOT. ARSENIC
- ___ 01027 TOT. CADMIUM
- ___ 01042 TOT. COPPER
- ___ 01045 TOT. IRON
- ___ 01051 TOT. LEAD
- ___ 01055 TOT. MANGANESE
- ___ 01067 TOT. NICKEL
- ___ 01077 TOT. SILVER
- ___ 01092 TOT. ZINC
- ___ 71901 TOT. MERCURY
- ___ 00680 TOT. ORGANIC CARBON
- ___ 31614/5/6 FECAL COLIFORM
- ___ 32211 CHLORPHYLL a (corr)
- ___ 34371 ETHYL BENZENE
- ___ 34475 TETRACHLOROETHYLENE
- ___ 34010 TOLUENE
- ___ 34506 1,1,1 TRICHLOROETHANE
- ___ 81551 XYLENE (AS C8H10)
- ☑ TBT (Tributyltin)
- ___ OTHER:
- ___ 01043 SED. COPPER

DO YOU WANT LOCATION OF MONITORING STATION(s) INDICATED:

YES X See outfall location map NO ___ (DEFAULT)

REQUEST WILL BE RETURNED BY E-MAIL ATTACHMENT UNLESS OTHERWISE REQUESTED

(***NOTE***: HARD COPY **NOT** AVAILABLE FOR ALLPARM DUE TO FILE SIZE)



SUMMARY OF AVAILABLE IN-STREAM WATER QUALITY DATA
SURFACE SAMPLE, STATION ELD01

DATE	DIS. OXYGEN (mg/l)	pH (SU)	SALINITY (o/oo)	TEMP (°C)	CLARITY (disc depth, m)	TURBIDITY (NTU)
06/23/2005	6.7	7.9	18.8	24.0	0.7	9.0
07/21/2005	6.8	7.9	20.2	28.2	0.9	7.4
08/06/2005	6.9	7.9	21.0	29.1	0.8	7.1
09/22/2005	5.6	7.5	21.1	26.4	0.8	8.8
10/11/2005	6.0	7.4	16.0	22.7	1.0	5.5
11/08/2005	7.9	7.6	20.2	16.2	1.5	6.7
12/06/2005	9.4	8.0	19.5	9.8	1.2	7.4
01/25/2006	11.1	8.2	16.7	8.3	0.6	4.5
02/22/2006	12.4	8.0	16.9	7.3	1.0	5.5
03/23/2006	10.7	7.9	18.8	8.9	0.8	4.4
04/19/2006	8.2	7.5	20.1	15.7	1.2	2.5
05/22/2006	7.6	7.5	19.2	20.0	0.5	16.2
06/28/2006	5.7	7.4	19.0	25.4	1.0	5.3
07/31/2006	5.3	7.7	22.2	27.3	0.6	6.7
08/23/2006	5.7	7.5	22.4	27.0	1.0	5.7
09/27/2006	7.3	7.5	18.1	23.1	1.0	5.9
10/25/2006	7.8	7.8	16.0	15.6	1.2	5.7
11/28/2006	8.7	7.5	11.3	12.1	1.4	3.2
12/06/2006	8.7	7.7	14.1	11.3	1.4	3.1
01/22/2007	10.2	7.9	15.5	7.8	1.2	4.3
02/20/2007	11.4	7.9	16.3	3.7	0.9	8.2
03/21/2007	10.3	8.1	14.4	9.3	0.7	9.9
05/01/2007	8.2	7.9	14.1	17.6	0.7	8.8
05/23/2007	7.4	7.7	15.4	19.7	0.7	11.2
06/13/2007	7.1	7.8	19.6	24.2	0.9	4.3
07/18/2007	5.4	7.7	22.9	27.2	1.0	6.4
08/15/2007	6.7	8.0	23.4	27.9	0.7	5.3
09/26/2007	5.6	7.6	23.2	24.3	0.8	8.0
10/24/2007	5.7	7.6	24.0	22.4	1.1	6.2
11/14/2007	7.7	7.7	22.4	14.0	1.6	2.0
12/19/2007	11.5	7.9	22.2	8.4	1.9	2.5
MAXIMUM	12.4	8.2	24.0	29.1	1.9	16.2
MINIMUM	5.3	7.4	11.3	3.7	0.6	2.0
AVERAGE	7.9	7.7	18.9	18.2	1.0	6.4
90th%		8.0		27.3		
count = 31						

SUMMARY OF AVAILABLE IN-STREAM WATER QUALITY DATA
BOTTOM SAMPLE, STATION ELD01

DATE	DIS. OXYGEN (mg/l)	pH (SU)	SALINITY (o/oo)	TEMP (°C)	TURBIDITY (NTU)
06/23/2005	6.5	7.8	19.0	23.9	18.0
07/21/2005	5.8	7.7	20.4	27.7	20.0
08/06/2005	4.6	7.5	21.6	28.4	26.0
09/22/2005	5.7	7.6	21.0	26.3	13.0
10/11/2005	6.1	7.5	18.8	23.4	16.5
11/08/2005	8.0	7.6	20.5	16.0	9.1
12/06/2005	9.9	8.0	19.5	10.0	6.8
01/25/2006	11.0	8.2	16.7	8.3	6.0
02/22/2006	12.5	8.1	18.3	6.9	3.0
03/23/2006	10.7	7.9	19.0	9.0	4.8
04/19/2006	8.2	7.5	20.1	15.6	3.1
05/22/2006	7.8	7.5	19.2	19.9	11.1
06/28/2006	5.4	7.4	20.9	25.0	9.6
07/31/2006	4.6	7.6	22.7	26.6	13.6
08/23/2006	4.6	7.4	22.7	26.8	8.5
09/27/2006	7.7	7.5	18.4	23.2	5.2
10/25/2006	7.7	7.7	16.2	15.9	6.1
11/28/2006	8.5	7.5	12.6	12.2	4.5
12/06/2006	8.8	7.7	15.0	11.7	4.4
01/22/2007	10.0	7.9	16.0	8.3	6.3
02/20/2007	11.3	7.9	16.5	3.7	11.3
03/21/2007	10.0	8.0	15.6	9.5	6.0
05/01/2007	7.3	7.6	16.1	16.6	19.5
05/23/2007	7.0	7.6	15.7	19.4	11.3
06/13/2007	6.9	7.8	19.6	24.2	11.4
07/18/2007	5.0	7.7	23.3	26.7	12.5
08/15/2007	7.1	8.0	23.4	27.9	6.7
09/26/2007	5.3	7.6	23.3	24.3	9.8
10/24/2007	5.6	7.6	24.0	22.4	6.5
11/14/2007	7.4	7.7	22.9	13.8	4.9
12/19/2007	9.4	7.9	22.3	8.5	2.2
MAXIMUM	12.5	8.2	24.0	28.4	26.0
MINIMUM	4.6	7.4	12.6	3.7	2.2
AVERAGE	7.6	7.7	19.4	18.1	9.6
90th%		8.0		26.8	
count = 31					

ATTACHMENT 11

303(D) LISTED SEGMENTS

List of Impaired (Category 5) Waters in 2006

Assessment Unit ID	Waterbody Name	City / County*	Assessment Unit Description
VAT-G15E_WBE02A00	Western Branch, Elizabeth R. - Lower	02080208 CITY	Located between the Point Elizabeth and Lovett Point areas. From Sterns Creek confluence (RM 3.5) downstream to the mouth. Portion of CBP segment WBEMH. Portion of the DSS (ADMINISTRATIVE) shellfish direct harvesting condemnation # 065-007 E.

VA Overall AU Category: **5A**

Impairment		First Listed on 303(d)	TMDL Schedule	Impairment Specific Comments and/or Impairment Specific VA Category
Aquatic Life	**Estuarine Bioassessments** 1.60 SQUARE MILES	**2004**	**2010**	The Aquatic Life Use is impaired based on failure to meet a statistical evaluation constituting an un-impacted benthic organism population per CBP (Benthic-BIBI) analysis (VERSAR-2005). The source/stressor tool yielded an unknown source for the impairment
	Sources: Source Unknown			
Aquatic Life	**Oxygen, Dissolved**	**2006**	**2010**	The Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer (CFD reference conditions using the 2/26/2006 CFD results supplied by CBPO).
	Sources: Agriculture Atmospheric Deposition - Nitrogen Industrial Point Source Discharge Internal Nutrient Recycling Loss of Riparian Habitat Municipal Point Source Discharges Sources Outside State Jurisdiction or Borders Wet Weather Discharges (Non-Point Source) Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)			
Fish Consumption	**PCB in Fish Tissue**	**2006**	**2016**	The Fish Consumption Use is impaired based on the VDH fish consumption advisory for PCBs issued 12/13/04. This segment was previously identified (2004 IR) as a site-specific impairment for PCBs in fish tissue concentrations under TMDL ID VAT-G15E-04-02, this previous impairment TMDL due date is carried forward for this AU, rather than base the TMDL due date on the issuance date of the VDH PCB advisory. Fish Tissue impairment from 2002 303d assessment of 1993 Fish Tissue (2-species with PCBs) @ 2-WBE002.11. 2001 sampling showed 2-species @ 2-WBE002.11 & 3m species @ 2-WBE006.18 exceed DV (52 ppb) PCB contamination exceedance.
	Sources: Source Unknown			

Attachment 1-1

List of Impaired (Category 5) Waters in 2006

Assessment Unit ID	Waterbody Name	City / County*		Assessment Unit Description
Open-Water Aquatic Life	**Oxygen, Dissolved**	**2006**	**2010**	The Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer (CFD reference conditions using the 2/26/2006 CFD results supplied by CBPO). This segment was previously identified as impaired for
	Sources: Agriculture Atmospheric Deposition - Nitrogen Industrial Point Source Discharge Internal Nutrient Recycling Loss of Riparian Habitat Municipal Point Source Discharges Sources Outside State Jurisdiction or Borders Wet Weather Discharges (Non-Point Source) Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)			
Recreation	**Enterococcus**	**2006**	**2016**	The Recreation Use is impaired (4 violates / 26 observations) due to exceedance of the instantaneous criteria for Enterococcus bacteria. The previous Fecal Coliform indicator bacteria impairment no longer applies, replaced by Enterococcus criteria impairment since threshold of 12 observations reached, with TMDL ID: VAT-G15E-04-01 and due date same as original FC impairment.
	Sources: Source Unknown			

Attachment 1-2

ATTACHMENT 12

TABLE III(a) AND TABLE III(b) - CHANGE SHEETS

ATTACHMENT 12
TABLE III(a) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes)

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
005	ALL PARAMETERS	FROM: Not identified in past applications TO: Part I.A. at 1/6 Month	FROM: Not identified in past permits TO: No Limits	Proposed monitoring consistent with other similar shipyard discharges, refer to Attachment 6.	CDT 11/09
903	ALL PARAMETERS	FROM: Not required in current permit TO: Part I.A. at 1/Year	FROM: Not required in current permit TO: No Limits	Marine railways are point sources where storm water has the reasonable potential to become contaminated by industrial pollutants residues and wastes, DEQ determination that monitoring to be required. Proposed monitoring consistent with other similar shipyard discharges, refer to Attachment 6.	

ATTACHMENT 12
TABLE III(a) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes)

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
Part I.B. - Other Requirements or Special Conditions 1. Permit Reopeners a. Water Quality Standards – **retain** b. Nutrient Enriched Waters – **retain** c. Total Maximum Daily Load – **retain** 2. Notification Levels – retain 3. Best Management Practices – **retain, amend, relocate** c. Tributyltin Exclusion – **retain, relocate** 4. Effluent Sampling and Reporting – **retain, amend, expand, relocate** 5. Quantification Levels Under Part I.A. – **retain, amend, relocate** 6. Compliance Reporting Under Part I.A. – **retain, amend, relocate** 7. Materials Handling and Storage – **retain** 8. Water Quality Monitoring – **retain** Part I.C. – Toxics Management Program – **retain, amend** Part I.D. – Storm Water Management Condition – **retain, amend, expand.** Attachment A. – BMP Compliance Report – **retain, amend** Attachment B. – Water Quality Monitoring – **retain, amend**	Part I.B. - Other Requirements or Special Conditions 1. Permit Reopeners a. Water Quality Standards – **no change** b. Nutrient Enriched Waters – **no change** c. Total Maximum Daily Load – **no change** 2. Notification Levels – **no change** 3. Quantification Levels Under Part I.A. – **retain, relocated, amended language** 4. Compliance Reporting Under Part I.A. – **retain, relocated, amended language** 5. Materials Handling and Storage – **relocated** 6. Industrial Activities and Process Wastewater Discharges – **new condition, multi-purpose** 7. Best Management Practices – **relocated, amended, expanded** 8. Tributyltin Exclusion – **retained, relocated** 9. Water Quality Monitoring – **retained, increased frequency** Part I.C. – Toxics Management Program – **retain, amend** Part I.D. – Storm Water Management Condition – **retain, amend, expand.** Attachment A. – BMP Compliance Report – **retain, amend** Attachment B. – Water Quality Monitoring – **retain, amend** Attachment C. – TMP Report Form – **add**	CDT 11/09

ATTACHMENT 12
TABLE III(b) - VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes DURING PERMIT PROCESS and give a brief rationale for the change)

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
As of August 28, 2008, no changes to note in this regard					

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL

ATTACHMENT 13

NPDES INDUSTRIAL PERMIT RATING WORKSHEET

Revised 2/2003

State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: Associated Naval Architects, Incorporated

NPDES Permit Number: VA0087599

Permit Writer Name: C. Thomas

Date: June – August 2008

Major [ ] **Minor [X]** **Industrial [X]** **Municipal [ ]**

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?	X		
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?		X	
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?	X		
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?		X	
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?	X		
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			X
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3. Does the fact sheet provide effluent characteristics for each outfall?			
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			

List of Standard Conditions – 40 CFR 122.41

Duty to comply
Duty to reapply
Need to halt or reduce activity not a defense
Duty to mitigate
Proper O & M
Permit actions

Property rights
Duty to provide information
Inspections and entry
Monitoring and records
Signatory requirement
Bypass
Upset

Reporting Requirements
Planned change
Anticipated noncompliance
Transfers
Monitoring reports
Compliance schedules
24-Hour reporting
Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals

(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?		X	
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?		X	
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?		X	
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?	X		
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?	X		
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41

Duty to comply	Property rights	Reporting Requirements
Duty to reapply	Duty to provide information	Planned change
Need to halt or reduce activity not a defense	Inspections and entry	Anticipated noncompliance
Duty to mitigate	Monitoring and records	Transfers
Proper O & M	Signatory requirement	Monitoring reports
Permit actions	Bypass	Compliance schedules
	Upset	24-Hour reporting
		Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	C. Thomas
Title	Environmental Engineer, Sr.
Signature	
Date	August 2008

NPDES Permit Rating Work Sheet

___ Regular Addition
___ Discretionary Addition
X Score change, but no status change
___ Deletion

NPDES NO: VA0087599

Facility Name: ASSOCIATED NAVAL ARCHITECTS, INC.

City: PORTSMOUTH, VIRGINIA

Receiving Water: WESTERN BR. ELIZABETH RIVER

Reach Number:

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

___ YES: score is 600 (stop here) X NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

___ YES; score is 700 (stop here)
X NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: Primary SIC Code: 4499

Other SIC Codes: 3731 3732

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	15	___ 7.	7	35
___ 1.	1	5	___ 4.	4	20	___ 8.	8	40
___ 2.	2	10	___ 5.	5	25	___ 9.	9	45
			X 6.	6	30	___ 10.	10	50

Code Number Checked: 06

Total Points Factor 1: 30

FACTOR 2: Flow/Stream Flow Volume *(Complete Either Section A or Section B; check only one)*

Section A–Wastewater Flow Only Considered

Wastewater Type (See Instructions)			Code	Points
Type I:	Flow < 5 MGD	___	11	0
	Flow 5 to 10 MGD	___	12	10
	Flow > 10 to 50 MGD	___	13	20
	Flow > 50 MGD	___	14	30
Type II:	Flow < 1 MGD	___	21	10
	Flow 1 to 5 MGD	___	22	20
	Flow > 5 to 10 MGD	___	23	30
	Flow > 10 MGD	___	24	50
Type III:	Flow < 1 MGD	___	31	0
	Flow 1 to 5 MGD	___	32	10
	Flow > 5 to 10 MGD	___	33	20
	Flow > 10 MGD	___	34	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10%	___	41	0
	> 10% to < 50%	___	42	10
	> 50%	___	43	20
Type II:	<10%	X	51	0
	> 10% to < 50%	___	52	20
	> 50%	___	53	30

Code Checked from Section A or B: 51

Total Points Factor 2: 00

NPDES No.: | V | A | 0 | 0 | 8 | 7 | 5 | 9 | 9 |

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ___ BOD ___ COD _X_ Other: Not Monitored or limited

Permit Limits: (check one)		*Code*	*Points*
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: | - |

Points Scored: | 0 | 0 |

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		*Code*	*Points*
___	< 100 lbs/day	1	0
___	100 to 1000 lbs/day	2	5
___	>1000 to 5000 lbs/day	3	15
___	>5000 lbs/day	4	20

Code Checked: | - |

Points Scored: | 0 | 0 |

C. Nitrogen Pollutant: (check one) ___ Ammonia _X_ Other: Not Monitored or limited

Permit Limits: (check one)		*Code*	*Points*
___	< 300 lbs/day	1	0
___	300 to 1000 lbs/day	2	5
___	>1000 to 3000 lbs/day	3	15
___	>3000 lbs/day	4	20

Code Checked: | - |

Points Scored: | 0 | 0 |

Total Points Factor 3: | 0 | 0 |

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

___ YES (if yes, check toxicity potential number below)
_X_ NO (if no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
___ No process waste streams	0	0	___ 3.	3	0	___ 7.	7	15
___ 1.	1	0	___ 4.	4	0	___ 8.	8	20
___ 2.	2	0	___ 5.	5	5	___ 9.	9	25
			___ 6.	6	10	___ 10.	10	30

Code Number Checked: | - | - |

Total Points Factor 4: | 0 | 0 |

NPDES No.: | V | A | 0 | 0 | 8 | 7 | 5 | 9 | 9 |

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

		Code	Points
X	Yes	1	10
___	No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

		Code	Points
X	Yes	1	0
___	No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

		Code	Points
X	Yes	1	10
___	No	2	0

Code Number Checked: A | 1 | B | 1 | C | 1 |

Points Factor 5: A | 1 | 0 | + B | 0 | + C | 1 | 0 | = | 2 | 0 | **TOTAL**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): | 5 | 1 | *Enter the multiplication factor that corresponds to the flow code:* | . | 1 |

Check appropriate facility HPRI Code (from PCS):

	HPRI #	*Code*	*HPRI Score*	Flow Code	Multiplication Factor
___	1	1	20	11, 31, or 41	0.00
				12, 32, or 42	0.05
___	2	2	0	13, 33, or 43	0.10
				14 or 34	0.15
X	3	3	30	21 or 51	0.10
				22 or 52	0.30
___	4	4	0	23 or 53	0.60
				24	1.00
___	5	5	20		

HPRI code checked: | 3 |

Base Score: (HPRI Score) 30 **x (Multiplication Factor)** 0.1 **=** 3.0 **(TOTAL POINTS)**

B. Additional Points–NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

		Code	Points
X	Yes	1	10
___	No	2	0

C. Additional Points–Great Lakes Area of Concern
for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see instructions)

		Code	Points
___	Yes	1	10
X	No	2	0

Code Number Checked: A | 3 | B | 1 | C | 2 |

Points Factor 6: A | 0 | 3 | + B | 1 | 0 | + C | 0 | 0 | = | 13 | **TOTAL**

NPDES Permit Rating Work Sheet

NPDES NO: | V | A | 0 | 0 | 8 | 7 | 5 | 9 | 9 |

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	30
2	Flow/Stream flow Volume	00
3	Conventional Pollutants	00
4	Public Health Impacts	00
5	Water Quality Factors	20
6	Proximity to Near Coastal Waters	13
	TOTAL (Factors 1-6)	63

S1. Is the total score equal to or greater than 80? ___ Yes (Facility is a major) X No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?
X No
___ Yes (add 500 points to the above score and provide reason below:

Reason:

NEW SCORE: 63

OLD SCORE: _____

C. Thomas
Permit Reviewer's Name

(757) 518 - 2161
Phone Number

August, 2008
Date

ATTACHMENT 14

CHRONOLOGY SHEET

ATTACHMENT 14
VPDES PERMIT PROGRAM - CHRONOLOGY OF EVENTS

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ADD. INFO RECEIVED
05/23/2008		06/02/2008		06/13/2008

APPLICATION TO VDH: 06/02/2008 VDH COMMENTS RECEIVED: 06/10/2008

APPLICATION TO OWPS: With permit issuance OWPS COMMENTS RECEIVED:

APPLICATION ADMIN. COMPLETE: 06/02/2008 APPLICATION TECH. COMPLETE: 07/01/2008

DATE FORWARDED TO ADMIN: As necessary during processing.

Date	DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)

SIC Description for 3731

Description for 3731: Ship Building and Repairing

Division D: Manufacturing
Major Group 37: Transportation Equipment

Industry Group 373: Ship And Boat Building And Repairing

3731 Ship Building and Repairing

Establishments primarily engaged in building and repairing ships, barges, and lighters, whether self-propelled or towed by other craft. This industry also includes the conversion and alteration of ships and the manufacture of off-shore oil and gas well drilling and production platforms (whether or not self-propelled). Establishments primarily engaged in fabricating structural assemblies or components for ships, or subcontractors engaged in ship painting, joinery, carpentry work, and electrical wiring installation, are classified in other industries.

- Barges, building and repairing
- Cargo vessels, building and repairing
- Combat ships, building and repairing
- Crew boats, building and repairing
- Dredges, building and repairing
- Drilling and production platforms, floating, oil and gas
- Drydocks, floating
- Ferryboats, building and repairing
- Fireboats, building and repairing
- Fishing vessels, large: seiners and trawlers-building and repairing
- Hydrofoil vessels
- Landing ships, building and repairing
- Lighters, marine: building and repairing
- Lighthouse tenders, building and repairing
- Marine rigging
- Naval ships, building and repairing
- Offshore supply boats, building and repairing
- Passenger-cargo vessels, building and repairing
- Patrol boats, building and repairing
- Radar towers, floating
- Sailing vessels, commercial: building and repairing
- Scows, building and repairing
- Seiners, building and repairing
- Shipbuilding and repairing
- Submarine tenders, building and repairing
- Tankers (ships), building and repairing
- Tenders (ships), building and repairing
- Towboats, building and repairing
- Transport vessels, passenger and troop: building and repairing
- Trawlers, building and repairing
- Tugboats, building and repairing

SIC Description for 3732

Description for 3732: Boat Building and Repairing

Division D: Manufacturing
Major Group 37: Transportation Equipment

Industry Group 373: Ship And Boat Building And Repairing

3732 Boat Building and Repairing

Establishments primarily engaged in building and repairing boats. Establishments primarily engaged in manufacturing rubber and nonrigid plastics boats are classified in Major Group 30. Establishments primarily engaged in operating marinas and which perform incidental boat repair are classified in Transportation, Industry 4493; membership yacht clubs are classified in Services, Industry 7997; and those performing outboard motor repair are classified in Services, Industry 7699.

- Boat kits, not a model
- Boats, fiberglass: building and repairing
- Boats, rigid: plastics
- Boats: motorboats, sailboats, rowboats, and canoes-building and
- Canoes, building and repairing
- Dinghies, building and repairing
- Dories, building and repairing
- Fishing boats, small
- Houseboats, building and repairing
- Hydrofoil boats
- Kayaks, building and repairing
- Life boats, building and repairing
- Life rafts, except inflatable (rubber and plastics)
- Motorboats, inboard and outboard: building and repairing
- Pontoons, except aircraft and inflatable (rubber and plastics)
- Skiffs, building and repairing

[SIC Search | Division Structure | Major Group Structure | OSHA Standards Cited]

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SIC Description for 4499

Description for 4499: Water Transportation Services, Not Elsewhere Classified

Division E: Transportation, Communications, Electric, Gas, And Sanitary Services
Major Group 44: Water Transportation

Industry Group 449: Services Incidental To Water Transportation

4499 Water Transportation Services, Not Elsewhere Classified

Establishments primarily engaged in furnishing miscellaneous services incidental to water transportation, not elsewhere classified, such as lighterage, boat hiring, except for pleasure; chartering of vessels; canal operation; ship cleaning, except hold cleaning; and steamship leasing. Establishments primarily engaged in ship hold cleaning are classified in Industry 4491; and those primarily engaged in the operation of charter or party fishing boats or rental of small recreational boats are classified in Services, Industry 7999.

- Boat cleaning
- Boat hiring, except pleasure
- Boat livery, except pleasure
- Boat rental, commercial
- Canal operation
- Cargo salvaging, from distressed vessels
- Chartering of commercial boats
- Dismantling ships
- Lighterage
- Marine railways for drydocking, operation of
- Marine salvaging
- Marine surveyors, except cargo
- Marine wrecking: ships for scrap
- Piloting vessels in and out of harbors
- Ship cleaning, except hold cleaning
- Ship registers: survey and classification of ships and marine
- Steamship leasing

[SIC Search | Division Structure | Major Group Structure | OSHA Standards Cited]

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ATTACHMENT

PUBLIC PARTICIPATION